



Sport Industry
Research
Centre



Agribusiness
& Economics
Research Unit
LINCOLN UNIVERSITY



Social Return on Investment of recreational physical activity in Aotearoa New Zealand

TECHNICAL REPORT

FEBRUARY 2023

This report has been commissioned by Sport New Zealand Ihi Aotearoa and prepared by Professor Larissa Davies, Professor Paul Dalziel and Dr. Catherine Savage, on behalf of an international consortium of researchers from Sheffield Hallam University; AERU, Lincoln University; Ihi Research and 4Global.

The Sport Industry Research Centre (SIRC) is part of Sheffield Hallam University, UK. SIRC comprises a team of researchers who commonly apply the principles of economics, management science and social science to solve real world problems. The SIRC team have pioneered the use of economics in sport and physical activity in three main areas: calculating the value of sport to the economy, measuring the economic impact of events, and valuing the wider social impacts achieved by sport. Research clients include national and local government, national governing bodies and agencies for sport, sports organisations and charities, both within the UK and from other countries.



The Agribusiness and Economics Research Unit (AERU) at Lincoln University was created by a decision of the New Zealand Cabinet in 1962. Since then, the AERU has provided economic and social analysis for a wide range of public and private sector organisations. Its mission is to exercise leadership in research for sustainable wellbeing. It has previously completed research for Sport New Zealand on the economic contribution of the sport and recreation sector to the New Zealand economy.



Ihi Research is a New Zealand Māori owned research company. Since 2013, Ihi Research has undertaken a wide range of projects involving community research for private companies, trusts, government agencies, and NGOs. Ihi Research are committed to producing research that represents the interests of the Māori communities they work for. They have previously completed research and evaluation for Whānau Ora and Sport New Zealand, evaluating the impact of investment for tamariki and their whānau in Te Waipounamu.



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Disclaimer:

While every effort has been made to ensure that the information herein is accurate, the authors do not accept any liability for error of fact or opinion which may be present, nor for the consequences of any decision based on this information.

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GLOSSARY OF MĀORI TERMS¹

aroha - **(noun)** affection, sympathy, charity, compassion, love, empathy.

awa - **(noun)** river, stream, creek, canal, gully, gorge, groove, furrow.

awhi - **(verb)** to embrace, hug, cuddle, cherish

haka - **(noun)** performance of the haka, posture dance - vigorous dances with actions and rhythmically shouted words. A general term for several types of such dances.

hapū - **(noun)** kinship group, clan, tribe, subtribe - section of a large kinship group and the primary political unit in traditional Māori society. It consisted of a number of *whānau* sharing descent from a common ancestor, usually being named after the ancestor, but sometimes from an important event in the group's history. A number of related *hapū* usually shared adjacent territories forming a looser tribal federation (*iwi*).

hauora - **(noun)** health, vigour.

hui - **(noun)** gathering, meeting, assembly, seminar, conference.

iwi - **(noun)** extended kinship group, tribe, nation, people, nationality, race - often refers to a large group of people descended from a common ancestor and associated with a distinct territory.

kai - **(noun)** food, meal.

kaihaka - **(noun)** performer.

kaitiaki - **(noun)** trustee, minder, guard, custodian, guardian, caregiver, keeper, steward.

kapa haka - **(noun)** concert party, *haka* group, Māori cultural group, Māori performing group.

karakia - **(noun)** incantation, ritual chant, chant, intoned incantation, charm, spell - a set form of words to state or make effective a ritual activity.

kaumātua - **(noun)** adult, elder, elderly man, elderly woman, old man - a person of status within the *whānau*.

kaupapa - **(noun)** topic, policy, matter for discussion, plan, purpose, scheme, proposal, agenda, subject, programme, theme, issue, initiative.

kī-o-rahi - **(noun)** a traditional ball game - played with a small round flax ball called a *kī*. Two teams of seven players, *kaioma* and *taniwha*, play on a circular field divided into zones, and

¹ Definitions from Te Aka Māori Dictionary <https://maoridictionary.co.nz/>

score points by touching the *pou* (boundary markers) and hitting a central *tupu*, or target. The game is played with varying rules (e.g. number of people, size of field, tag ripping rules, etc.) depending on the geographic area it is played in. It is played for 4 quarters or 2 halves of a set time, teams alternate roles of *kīoma* and *taniwha* at 1/2 or 1/4 time.

kōhanga reo - **(noun)** Māori language preschool.

kotahitanga - **(noun)** unity, togetherness, solidarity, collective action.

kura - **(noun)** school, education, learning gathering.

mahinga kai - **(noun)** garden, cultivation, food-gathering place.

mana - **(noun)** prestige, authority, control, power, influence, status, spiritual power, charisma - *mana* is a supernatural force in a person, place or object. *Mana* goes hand in hand with *tapu*, one affecting the other. The more prestigious the event, person or object, the more it is surrounded by *tapu* and *mana*. *Mana* is the enduring, indestructible power of the *atua* and is inherited at birth, the more senior the descent, the greater the *mana*. The authority of *mana* and *tapu* is inherited and delegated through the senior line from the *atua* as their human agent to act on revealed will. Since authority is a spiritual gift delegated by the *atua*, man remains the agent, never the source of *mana*. This divine choice is confirmed by the elders, initiated by the *tohunga* under traditional consecratory rites (*tohi*). *Mana* gives a person the authority to lead, organise and regulate communal expeditions and activities, to make decisions regarding social and political matters. A person or tribe's *mana* can increase from successful ventures or decrease through the lack of success. The tribe give *mana* to their chief and empower him/her and in turn the *mana* of an *ariki* or *rangatira* spreads to his/her people and their land, water and resources. Almost every activity has a link with the maintenance and enhancement of *mana* and *tapu*. Animate and inanimate objects can also have *mana* as they also derive from the *atua* and because of their own association with people imbued with *mana* or because they are used in significant events. There is also an element of stewardship, or *kaitiakitanga*, associated with the term when it is used in relation to resources, including land and water.

mana motuhake - **(noun)** separate identity, autonomy, self-government, self-determination, independence, sovereignty, authority - *mana* through self-determination and control over one's own destiny.

Māori - **(noun)** Māori, indigenous New Zealander, indigenous person of Aotearoa/New Zealand - a new use of the word resulting from Pākehā contact in order to distinguish between people of Māori descent and the colonisers.

marae - **(noun)** courtyard - the open area in front of the *wharenui*, where formal greetings and discussions take place. Often also used to include the complex of buildings around the *marae*.

Matatini – **(noun)** National kapa haka competition.

mātauranga - **1. (noun)** knowledge, wisdom, understanding, skill - sometimes used in the plural. **2. (noun)** education - an extension of the original meaning and commonly used in modern Māori with this meaning.

maunga - **(noun)** mountain, mount, peak.

mauri - **(noun)** life principle, life force, vital essence, special nature, a material symbol of a life principle, source of emotions - the essential quality and vitality of a being or entity. Also used for a physical object, individual, ecosystem or social group in which this essence is located.

mihimihi - **(noun)** speech of greeting, tribute - introductory speeches at the beginning of a gathering after the more formal *pōwhiri*. Often take place in the evening after *karakia* in the meeting house. The focus of *mihimihi* is on the living and peaceful interrelationships.

moana - **(noun)** sea, ocean, large lake.

moko – **(noun)** short for mokopuna (Grandchild)

mokopuna – **(noun)** grandchild, grandchildren

nau mai, haere mai – **(interjection)** welcome, welcome.

Ngāti Wairere - **(personal noun)** tribal group to the north of Hamilton.

pā - **(noun)** fortified village, fort, stockade, screen, blockade, city (especially a fortified one).

Pākehā - **(noun)** New Zealander of European descent - probably originally applied to English-speaking Europeans living in Aotearoa/New Zealand. Despite the claims of some non-Māori speakers, the term does not normally have negative connotations.

pōwhiri - **(noun)** invitation, rituals of encounter, welcome ceremony on a marae, welcome.

rangatahi - **(noun)** younger generation, youth.

rautaki - **(noun)** strategy

ringawera - **(noun)** kitchen worker, kitchen hand.

tamariki - **(noun)** children - normally used only in the plural.

tangata whenua - **(noun)** local people, hosts, indigenous people - people born of the whenua, i.e. of the placenta and of the land where the people's ancestors have lived and where their placenta are buried.

tautoko - **(modifier)** supporting.

Te Arawa - **(personal noun)** people descended from the crew of this canoe from Hawaiki who form a group of tribes in the Rotorua-Maketū area.

te reo - **(noun)** language, dialect, tongue, speech. Refers to the Māori language.

tikanga - **(noun)** correct procedure, custom, habit, lore, method, manner, rule, way, code, meaning, plan, practice, convention, protocol - the customary system of values and practices that have developed over time and are deeply embedded in the social context.

Tiriti o Waitangi – **(loan) (noun)** Treaty of Waitangi.

tūrangawaewae - **(noun)** domicile, standing, place where one has the right to stand - place where one has rights of residence and belonging through kinship and *whakapapa*.

waiata - **1. (verb)** (-hia,-tia) to sing. **2. (noun)** song, chant, psalm.

wairua - **(noun)** spirit, soul - spirit of a person which exists beyond death. It is the non-physical spirit, distinct from the body and the *mauri*. To some, the *wairua* resides in the heart or mind of someone while others believe it is part of the whole person and is not located at any particular part of the body.

waka ama - **(noun)** outrigger canoe.

waka hourua - **(noun)** double canoe

wānanga - **(noun)** seminar, conference, forum, educational seminar.

whakapapa - **(noun)** genealogy, genealogical table, lineage, descent - reciting *whakapapa* was, and is, an important skill and reflected the importance of genealogies in Māori society in terms of leadership, land and fishing rights, kinship, and status. It is central to all Māori institutions. There are different terms for the types of *whakapapa* and the different ways of reciting them including: *tāhū* (recite a direct line of ancestry through only the senior line); *whakamoe* (recite a genealogy including males and their spouses); *taotahi* (recite genealogy in a single line of descent); *hikohiko* (recite genealogy in a selective way by not following a single line of descent); *ure tārewa* (male line of descent through the first-born male in each generation).

whakataukī - **(noun)** proverb, significant saying, formulaic saying, cryptic saying, aphorism. Like *whakataukī* and *pepeha* they are essential ingredients in *whaikōrero*.

whānau - **(noun)** extended family, family group, a familiar term of address to a number of people - the primary economic unit of traditional Māori society. In the modern context the term is sometimes used to include friends who may not have any kinship ties to other members.

whanaungatanga - **(noun)** relationship, kinship, sense of family connection - a relationship through shared experiences and working together which provides people with a sense of belonging. It develops as a result of kinship rights and obligations, which also serve to strengthen each member of the kin group. It also extends to others to whom one develops a close familial, friendship or reciprocal relationship.

whenua - **(noun)** land - often used in the plural.

EXECUTIVE SUMMARY

Context

Sport New Zealand Ihi Aotearoa commissioned a consortium of international researchers, jointly led by Sheffield Hallam University (United Kingdom) and the Agribusiness and Economics Research Unit (AERU) at Lincoln University (New Zealand) acting in partnership with Ihi Research and 4Global, to conduct a Social Return on Investment (SROI) of recreational physical activity in Aotearoa New Zealand. The study was commissioned to better understand, demonstrate, and communicate the contribution of recreational physical activity to the wellbeing of people living in Aotearoa New Zealand.

Methodology

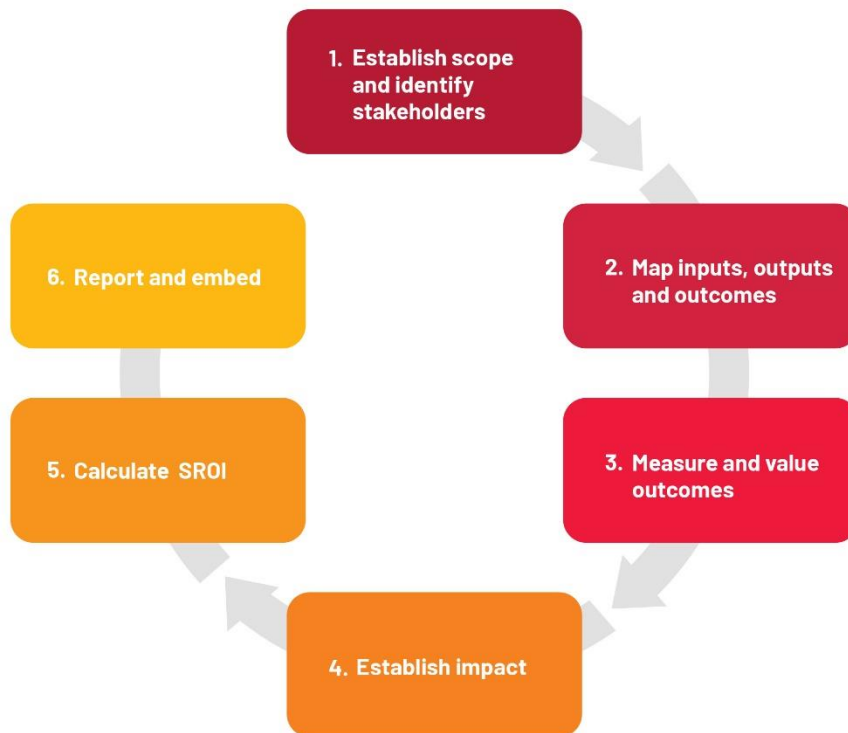
This study uses an SROI framework to measure the social impact of recreational physical activity in Aotearoa New Zealand in 2019. It measures the value of outcomes generated through sport and recreational activity and the net costs, or inputs, of providing opportunities for engagement. The SROI is evaluative, meaning it was conducted retrospectively and is based on participation which has already taken place. It is a national population study, which applies SROI principles to be fit for its purpose. The report is a public document, which will be used to inform future government investment and strategy.

The Aotearoa New Zealand SROI model estimates the monetary value of nine outcomes across six domains of wellbeing including: two health outcomes; three outcomes related to subjective wellbeing; and one outcome each from income, consumption and wealth; work, care and volunteering; family and friends; and safety.

A chapter in the study also examines the value of outcomes articulated by Māori stakeholders, without monetising these in the SROI. Māori aspirations are derived from an accumulation of heritage including knowledge systems, values and beliefs, and their manifestations in objects, practices and concepts – all of which have an *innate life force* or *mana*. It was agreed these outcomes must therefore be treated accordingly, not measured for their contributions to economic expenditure or production.

Stakeholder engagement and data collection for the analysis was conducted through a mix of methods, including a desk-based literature review, stakeholder interviews and secondary data collection. The figure below outlines the six stages of the SROI analysis in Aotearoa New Zealand.

The Stages of an SROI



Key findings

The literature review found evidence of mixed volume and quality on the extent to which sport and recreational physical activity contributes to wellbeing outcomes in Aotearoa New Zealand. Of the papers found, the largest volume of literature is around social and community development, followed by physical health. For the other identified outcome areas of subjective wellbeing, individual development and personal development, there were smaller volumes of literature. Despite the varying volumes of existing literature, there is some compelling and useful evidence which does show some examples of the links between sport and recreational physical activity and wellbeing outcomes in each of the areas for specific sub-groups, including for Māori communities. In terms of quality of evidence available, physical health is the strongest area, with the most examples of research demonstrating the monetary value of physical health outcomes. Nevertheless, across all areas, the review revealed a lack of research on the monetary valuation of outcomes related to recreational physical activity in Aotearoa New Zealand. This report provides a baseline for ongoing work in this space.

The SROI analysis found that recreational physical activity in Aotearoa New Zealand generates considerable value to society beyond the traditional economic measures identified in previous studies of the value of sport and recreation. The findings of the SROI are summarised in the infographic at the end of this summary. Total inputs are estimated to be **\$7.95bn**, and the total value of all nine outcomes is estimated at **\$16.81bn**.

The study demonstrates that investments in recreational physical activity yield a positive return, and that for every \$1 invested in recreational physical activity in 2019, \$2.12 worth of social value was generated for individuals and society.

The majority of this value flows to the general population, particularly through better health and higher subjective wellbeing. Value also flows to sports and physical recreation clubs through the contributions of volunteers.

The research included a sensitivity analysis of this conclusion. The research team is confident about the inputs data, and so we tested the sensitivity of the benefit assumptions in the SROI model in two ways. First, we tested the implications of alternative assumptions for four key components in the benefits, and then we combined the Low assumptions, and we combined the High assumptions to present an overall picture of the range of possible values depending on different assumptions. This analysis resulted in a range of SROI values from 1.18 to 3.10.

As with previous international SROI studies of this nature, the estimates provided for the monetised outcomes are conservative. The research only included social outcomes that could be robustly evidenced, to maintain a higher level of rigour in the study. We have excluded some items for which insufficient evidence exists or there is a lack of data, for example social outcomes relating to children and young people. As such, the findings of this research are likely to underestimate the true social value of sport in Aotearoa New Zealand.

In addition to the valuation provided for the monetised outcomes, the study investigated the value of non-monetised outcomes for Māori. Māori stakeholders described outcomes that are consistent with Māori views of wellbeing, noting dimensions other than physical – i.e., spiritual, mental, emotional, cultural health, all within a context of environmental health. These non-monetised outcomes reported by Māori are particularly evident in Māori sport and recreation events that are run ‘by Māori for Māori’ where Māori can participate ‘as Māori’. Analysis of qualitative data demonstrates that recreation makes a significant contribution to Māori wellbeing through strengthening intergenerational relationships and reinforcing cultural values, beliefs, social norms and knowledge. ‘As-Māori’ organisations and events utilise sport and recreation as a vehicle to reclaim and reinvigorate Māori collective communities of care.

Recommendations

The findings of this study demonstrate that recreational physical activity contributes to several wellbeing domains identified in the Living Standards Framework. This is a powerful message to share with stakeholders across and beyond the sector. We recommend that Sport NZ use these findings to support cross-government conversations on investment in recreational physical activity for wellbeing outcomes. Furthermore, we suggest that the SROI report and findings are widely disseminated to all stakeholders across the recreational physical activity sector, and that together with stakeholders, principles are developed for

organisations in the sector on responsible use of methods to estimate social impact. The research team highly recommend that the dissemination of the study and the discussion of the principles include a Māori perspective.

Moving forwards, we recommend that the findings of this study are used to identify a list of research priorities for addressing the limitations and gaps in evidence identified in this study. Notably, the measurement and valuation of social capital; outcomes for young people; the negative effects of participation; and understanding how the whole experience of recreational physical activity is built around Māori culture, and the cultural knowledge systems, values and beliefs therein. The purpose of an SROI analysis is not just to prove the value of an activity. Rather, it is to understand what changes and to use this knowledge to optimise the value created from activities. We recommend that the New Zealand SROI model developed in this report is reviewed and updated on a periodic basis, to integrate new and improved evidence on the social impact of recreational physical activity as it emerges, and to inform Sport NZ's management approach to making improvements to activities, initiative and services in the future.



SOCIAL RETURN ON INVESTMENT (SROI)

FOR RECREATIONAL PHYSICAL ACTIVITY

IN AOTEAROA NEW ZEALAND | 2019



SROI OUTCOMES

\$16.81bn

Estimated value in key domains for measuring the impact of sport and physical activity participation in Aotearoa New Zealand based on empirical evidence.

HEALTH \$9.02bn

Better quality of life and increased life expectancy	\$8.34bn
Prevention of diseases attributable to physical inactivity	\$680m

SUBJECTIVE WELLBEING \$3.32bn

Increased wellbeing (life satisfaction) adult participants	\$3.18bn
Increased wellbeing (happiness) young people (5-17)	\$56m
Increased wellbeing (life satisfaction) adult volunteers	\$79m

INCOME, CONSUMPTION AND WEALTH \$889m

Higher output from reduced absenteeism

WORK, CARE AND VOLUNTEERING \$3.09bn

Replacement value of volunteering

FAMILY AND FRIENDS \$1.13bn

Enhanced social capital created by participation

SAFETY -\$620m

Increase in the number of accidents and injuries related to sport and recreation



SROI INPUTS

\$7.95bn

The net cost of stakeholders' contribution to provide opportunities for engagement in sport and physical activity.

HOUSEHOLDS \$2.95bn

PRIVATE SECTOR \$280m

CENTRAL GOVERNMENT \$623m

VOLUNTARY SECTOR \$3.09bn

LOCAL GOVERNMENT \$1.01bn



SROI RATIO

2.12

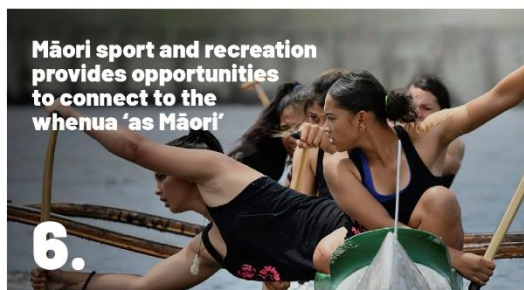
For every \$1 invested in recreational physical activity, \$2.12 worth of social impacts are generated.

PARTNERS



Outcomes for Māori in recreational physical activity in Aotearoa

Sport and recreation make a significant contribution to Māori wellbeing through strengthening intergenerational relationships and reinforcing cultural values, beliefs, social norms and knowledge.



CHAPTER 1: INTRODUCTION

In August 2021, Sport New Zealand Ihi Aotearoa (hereafter referred to as Sport NZ) commissioned a consortium of international researchers, jointly led by Sheffield Hallam University (United Kingdom) and the Agribusiness and Economics Research Unit at Lincoln University (New Zealand) acting in partnership with Ihi Research and 4 Global, to conduct a programme of work on the Social Return on Investment (SROI) of recreational physical activity in Aotearoa New Zealand.

Sport NZ is a Crown agency created to act as a kaitiaki or guardian of the Aotearoa New Zealand play, active recreation, and sport system. It promotes and supports quality experiences to improve levels of physical activity and through this ensure the greatest impact on wellbeing for all New Zealanders. In recent years, Sport NZ has undergone a cultural transformation, under which working in a culturally appropriate way with a strong focus on more equitable outcomes for Māori and a commitment to the Treaty of Waitangi is expected:

Sport New Zealand Ihi Aotearoa Treaty of Waitangi Commitment:

Te Tiriti o Waitangi is Aotearoa New Zealand's founding document. Sport NZ Ihi Aotearoa is committed to upholding the mana of Te Tiriti o Waitangi and the principles of Partnership, Protection and Participation.

We are committed to partnership with tangata whenua and the protection of Māori culture and taonga. We value the distinctiveness that tangata whenua bring to physical activity and our success on a world stage. We believe a strong bi-cultural foundation is critical to our national identity and wellbeing.

Aotearoa New Zealand will realise its full potential in play, active recreation and sport when tangata whenua and all New Zealanders are able to participate and succeed as themselves.

Source: <https://sportnz.org.nz/kaupapa-maori/te-tiriti-o-waitangi/>

Sport NZ commissioned this national population research as part of its programme to better understand, demonstrate and communicate the contribution of recreational physical activity to the wellbeing of people living in Aotearoa New Zealand.

Consequently, the objectives of the study are to:

1. Improve understanding of the value of recreational physical activity to tangata whenua and all New Zealanders.
2. Set a benchmark for reliable and responsible social impact methods in Aotearoa New Zealand's play, active recreation, and sport sector.
3. Support cross-government conversations on investment in recreational physical activity for wellbeing outcomes.

Estimates of the value of sport and recreation to the New Zealand economy date back to the early 1990s and the work of Jenson et al. (1993). Several studies have been commissioned (e.g., Frater et al., 1998; Goodchild et al., 2000; Dalziel, 2011), the most recent being a study on the economic value of sport and outdoor recreation in 2013/14 (Dalziel, 2015). The primary focus of these studies was the measurement of economic value using traditional 'market' indicators such as Gross Domestic Product (GDP), employment and household spending.

Since those early studies, public policy in Aotearoa New Zealand has been reframed using a more explicit focus on wellbeing. This is reflected, for example, in the New Zealand Treasury's Living Standards Framework, which identifies 12 domains of current wellbeing (Treasury 2021). Consequently, this study complements previous research by including analysis of the wider 'non-market' effects of recreational physical activity. It is the first population-level SROI analysis of physical recreational activity in Aotearoa New Zealand, and it aims to measure and value the contribution of recreational physical activity to wellbeing to tangata whenua and all New Zealanders.

1.1 Research context

Internationally, growing evidence supports claims that sport and active recreation contribute to a wide range of wellbeing outcomes such as improved health, better social connections, higher levels of social inclusion and trust, and better community engagement (Keanne et al., 2019). A major review of international literature by Taylor et al. (2015) synthesised evidence on the social impact of sport and exercise. It concluded that although there is growing evidence of a positive relationship between sport and several social outcomes (including health, crime, education, social capital and subjective wellbeing), there is a lack of evidence that quantifies and values these effects in monetary terms. This presents challenges to policy makers, who face multiple competing investment priorities.

Previous work in Aotearoa New Zealand includes Sport New Zealand's (2017) *Value of Sport*, which was based on research comprised of three stages: firstly, a review of international literature concerning the benefits from participation in sport and active recreation; secondly, qualitative research with members of the general public and sport and recreation sector stakeholders to gain perspectives on the value of sport; and finally, quantitative research in the form of a survey involving a sample of the general public, people working in the sport and recreation sector, representatives of organisations operating in the sport and recreation sector, and other organisations. Whilst the study was an important piece of work, and demonstrated the value of sport for achieving wellbeing outcomes in Aotearoa New Zealand to some extent, it did not give a complete picture. The findings were based on a mix of evidence and opinion, the research did not monetise the value of sport, and importantly the study did not consider the value of physical activity for Māori.

A recent review by Gosselin et al. (2020) found that a variety of methods have been used to quantify the benefits of sport and physical activity. The shift in nature of the outcomes measured in sport and recreation, from economic to harder-to-measure social outcomes, has seen the emergence of new methods and techniques to understand the wellbeing implications of investment in sport and physical activity. SROI is one such method that has gained traction in recent years. In 2014, it was first used by researchers from Sheffield Hallam University to measure the impact of population-wide sport and physical activity in England (Davies et al., 2019). Subsequently, it has been used to measure the social value of sport and recreation at the population level in other countries, including the regions of Flanders and Wallonia in Belgium (Sport Flanders, 2022) and The Netherlands (Rebel and The Mulier Institute, 2022). The SROI method has also been used to provide updated estimates for the social value of sport and physical activity in England (Sport England, 2020).

1.2 Scope of the study

The scope of the study was agreed with Sport NZ at the start of the project. It was agreed that the year of study would be 2019, which reflects the most recent year for which secondary data was realistically available before the disruptions created by the public health response to the COVID-19 outbreak. The target population is tangata whenua and all New Zealanders, aged 5 years and older. The geographical region is all Aotearoa New Zealand.

There is no standard definition of **recreational physical activity** used by Sport NZ or other stakeholder groups. For the purposes of this study, the research team agreed a broad definition with Sport NZ, as follows:

Competitive sport, undertaken in an organised structure, for example, in a competition or tournament, or informally outside an organised structure; and non-competitive active recreation for enjoyment and wellbeing, that occurs in the built, landscape and natural environments. This may include activities such as kapa haka, fitness/exercise, dance, tramping, outdoor recreation and active play, but excludes household activities such as gardening, and other domestic activities. Active transport for work commuting was also excluded.

All activities falling within this definition are included within the scope of the study.

1.3 Structure of this report

The report is structured as follows:

- Chapter 2 outlines the approach and method;
- Chapter 3 provides a summary of the literature review;
- Chapter 4 discusses Stage 1 of the SROI, the identification of stakeholders;
- Chapter 5 summarises the stakeholder interviews and outlines what changes from the perspective of the stakeholders;

- Chapter 6 focuses on Stage 2 of the SROI, the mapping of inputs, outputs and outcomes; valuing what matters and materiality;
- Chapter 7 summarises Stage 3 of the SROI, the measurement and valuation of inputs, outputs and outcomes;
- Chapter 8 discusses Stage 4 of the SROI, establishing impact, and Stage 5, calculating the SROI. This chapter also discusses the sensitivity analysis and limitations of the study;
- Chapter 9 articulates the non-monetary value of recreational physical activity from the perspective of Māori stakeholders; and
- Chapter 10 presents the conclusions and recommendations.

CHAPTER 2: RESEARCH APPROACH

2.1 Overview

Social Return on Investment (SROI) is an internationally recognised framework used for understanding and measuring the non-market economic, social and environmental value created by an activity, organisation or intervention. It was originally developed as a measurement framework in the mid-1990s by the Roberts Enterprise Development Fund in the United States from Cost-Benefit Analysis (CBA), sustainability accounting and financial accounting (Davies et al., 2019; Nicholls et al., 2012). SROI is used by public agencies, private sector enterprises and third sector organisations across a wide range of policy areas, including sport and recreation, to value the wider (market and non-market) contribution of activities to society; to justify public investment; and to advocate for the benefits generated.

SROI is an outcome-based framework. It measures change in ways that are relevant to the people or organisations that experience or create it. SROI tells the story of how change is being created for stakeholders by measuring outcomes and using monetary values to represent those outcomes that stakeholders agree may be monetised. It offers an approach to social impact valuation for sport and physical activity that is transparent, conservative and involves stakeholders in identifying change (outcomes) that occurs as a result of recreational activities. An SROI analysis expresses the monetary value of outcomes in relation to the size of the total investment.

SROI is most commonly used to measure and account for the broad concept of value of specific programmes or activities primarily at the local level (e.g., Whānau Ora Commissioning Agency and Te Pūtea Whakatupu Trust, 2021). For this study, we use SROI at the national / population-level to identify change which occurs as a result of general participation in recreational physical activity. We build upon similar sport related SROI research conducted in England (Davies et al., 2019), which was revised and updated in 2019 (Sport England, 2020).

There are two types of SROI analysis: evaluative, which is conducted retrospectively and based on change which has already taken place; and, forecast, which predicts how much change will be created if activities meet their intended outcomes. The SROI study for Aotearoa New Zealand is **evaluative**. This means it was conducted retrospectively and based on participation which has already taken place.

2.2 Principles of SROI

SROI is based on eight Principles, which provide the building blocks for guiding decision making throughout the research process (Nicholls et al., 2012). Table 2.1 outlines the SROI Principles and the main chapter(s) where they are discussed within the report. Appendix A1

provides more detailed comments about how the Principles were applied in the study in relation to the Social Value International Report Assurance criteria².

Table 2.1: SROI Principles

SROI Principle	How the Principle was applied in the study	Chapter
Involve stakeholders	Stakeholders are at the heart of the SROI process. A range of stakeholder groups were included in the study, including Māori individuals and organisations. They were included through interviews with the research team in describing their own outcomes. They were also involved in identifying other stakeholders using a range of sources and methods, including a stakeholder mapping and engagement exercise, conducted by Sport NZ prior to the start of this study, and with the research team during the study. Stakeholders were also involved in defining the scope, identifying inputs, verifying the research process and findings.	3, 4
Understand what changes	Stories of change are a key part of SROI, and these were investigated through a mix of methods. Stakeholders were invited to discuss the changes they observed in themselves and others through 1-1 interviews and a focus group. We documented some of these changes through two case studies. The change process was also investigated through the literature review, the Sport New Zealand Outcomes Framework, Te Pākē o Ihi Aotearoa, the He Oranga Poutama Outcomes Framework and other policy documents.	3, 5, 6, 7, 9
Value things that matter	The relative importance of outcomes was investigated through the stakeholder interviews and from existing literature and evaluations. The SROI analysis includes seven outcomes that were valued in monetary terms and another two that were analysed qualitatively.	3, 5, 6, 7, 9
Only include what is material	The identification and materiality of stakeholder outcomes was identified by a cascade process of consultation, beginning with the key agency Sport NZ, and progressing through the stakeholder interviews. The outcomes map was generated from various sources, including the literature review, the stakeholder map, the Sport New Zealand Outcomes Framework, Te Pākē o Ihi Aotearoa and the He Oranga Poutama Outcomes Framework. Although early discussions with Sport NZ and previous SROI studies revealed outcomes that were likely to be identified, nothing was pre-determined. The outcomes considered most important by the stakeholders, and those identified as significant in the literature review and policy documents, were included if the data permitted.	4, 6, 7

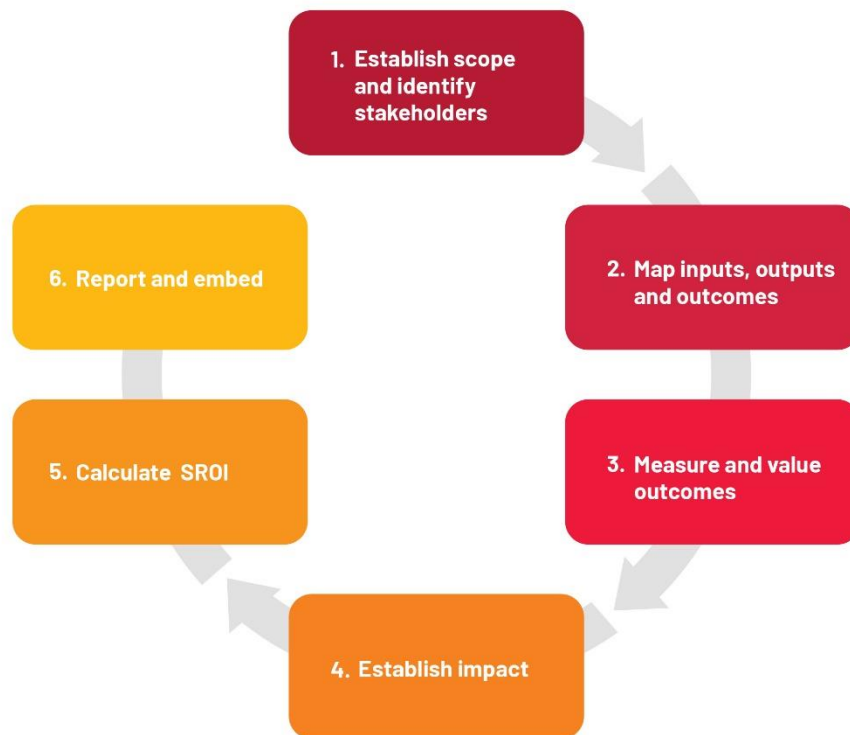
²Social Value International (2017) *Assurance Standard*. <https://www.socialvalueint.org/report-assurance>

SROI Principle	How the Principle was applied in the study	Chapter
Do not overclaim	During the stakeholder discussions, the research team explored attribution, displacement, and deadweight through the stories of change. Valuations were approached cautiously, with care taken not to double count. Evidence from the literature was used to inform decisions about potential overlapping outcomes (particularly between health quality of life and subjective wellbeing). The research team were cautious in the selection of financial proxies, and used sensitivity analysis to explore the impact of using alternative low and high values.	7, 8
Be transparent	This report comprehensively outlines our assumptions, judgements, data sources, calculations, and valuations throughout the research process. These are transparent and open to challenge. The sensitivity analysis deals with alternative quantities and values, and the research team used conservative assumptions throughout. The Value map identifies all sources and data used.	7, 8
Verify the result	Throughout the SROI analysis, the research team have sought to verify key decisions with stakeholder groups. The case studies were verified with participants. The SROI analysis will be presented and discussed with stakeholders during a workshop, which will be part of a programme of dissemination.	5, 6, 7, 8, 9
Be responsive	We have made recommendations about how Sport NZ can disseminate, embed, and use the SROI analysis to create more social value and advocate for investment in recreational physical activity in Aotearoa New Zealand.	10

2.3 Stages of an SROI

Figure 2.1 outlines the six stages involved in carrying out an SROI study. These are expanded upon below. Reporting of the Aotearoa New Zealand SROI in this document is structured accordingly.

Figure 2.1: The Stages of an SROI



1. **Establish scope and identify key stakeholders.** Establish the boundaries of the study and decide which stakeholders to include and exclude.
2. **Map inputs, outputs and outcomes in logic model.** Engage stakeholders to identify relevant inputs and decide which are, in principle, *material* outputs and outcomes. Develop a value map or theory of change to show the relationships between these.
3. **Measure and value outcomes.** Identify indicators through literature, primary survey data, secondary data, and financial proxies. Decide which inputs, outputs and outcomes can be included because of sufficient empirical evidence, and which must be excluded on the grounds of insufficient evidence. Ensure that there is no double-counting of either inputs or outputs.
4. **Establish impact.** Deduct deadweight (what would have happened anyway) and displacement (where the activity has simply replaced another). Identify attribution (the percentage of outcomes attributable to this activity, rather than other activities).
5. **Calculate the SROI.** Calculate the SROI ratio by adding up the value of all the benefits, subtracting any negatives and dividing the net social value of sport and active recreation participation by the total costs/investment). Test the sensitivity of the estimated SROI to variations in the outcome measures, financial proxies, and other key variables.

6. **Report and embed.** Report to stakeholders for verification; identify gaps in the evidence base; make recommendations; disseminate the results.

2.4 Stakeholder engagement in a population-level analysis

As noted in chapter 1, this research estimates the social rate of return to investment in recreational physical activity by the national population. Involving stakeholders is at the heart of SROI (Social Value International, 2019a, p. 2), so that particular care is required to achieve effective stakeholder engagement in a population-level study. The research team followed a stakeholder engagement plan that reflected the main things to remember as summarised by Social Value International (2019a, p. 5):

- Stakeholders should be involved in the process of determining the outcomes that they are experiencing, allowing for any outcomes to emerge whether they are intended or unintended, positive or negative.
- Information from stakeholders should be triangulated with the views of others (i.e. staff delivering the service) and other third-party research or evidence.
- There will be a trade-off between the resources you have available and the level of involvement that is possible. Any trade-off should be acknowledged in the reporting of social value, highlighting any risks that material outcomes may not have been identified.
- The number of interactions with stakeholders and their time required should be kept to the minimum to avoid unnecessary disturbance or intrusion.

The main methods used for stakeholder engagement were the following.

Literature review of previous studies. Researchers have engaged with stakeholders about recreational physical activity for decades. The results of that engagement can be accessed through a well-designed literature review. Prior to this study, Sport NZ had commissioned Angus & Associates to undertake such a review in June/July 2016, focused on identifying benefits (for example, improved health or educational outcomes) and ranking the quality of evidence for each benefit as gold, silver or bronze (Angus & Associates, 2017, p. 50). The results of the literature review were published to allow public feedback (see also Sport New Zealand, 2017). The research team evaluated the quality of that engagement as high, but recognised that this is an expanding field. It therefore undertook its own review of previous studies, as described in chapter 3 of this report.

One-on-one interviews and focus groups with the general public. In August and September 2016, Angus and Associates interviewed a carefully selected sample involving 42 members of the general public to explore and understand how they assessed the value of sport and recreation to New Zealand and to New Zealanders (Angus & Associates, 2017, p. 13). The research team considered that engagement to be high quality. Following the fourth bullet point above, it was not considered necessary to repeat this form of engagement six years later.

Meetings with representative stakeholders. For a population level study, it is appropriate to engage with representatives of individual stakeholders, such as senior managers of organisations involved in the sector. In August and September 2016, Angus and Associates had conducted 34 meetings with representatives of government agencies, organisations operating in the sport and recreation sector, education providers, community groups and the general business community (Angus & Associates, 2017, p. 51). The purpose was to explore and understand how beneficiaries, including the general public, assessed the value of sport and recreation to New Zealand and to New Zealanders. The research team agreed with its funder to conduct a further 6-8 interviews with representative stakeholders, which it later extended to 9 interviews. This is described in chapter 4 and the results summarised in chapter 5.

Quantitative survey of the general public. Between November 2016 and February 2017, Angus & Associates undertook an online survey (the Value of Sport Survey) of 1,516 residents in New Zealand aged 18 years or above, using the Survey Sampling International (SSI) panel. The sample was stratified by age group within each region and included quotas for ethnicity. The final sample closely reflected population distribution as measured in New Zealand's 2013 Census.

Quantitative survey of stakeholder representatives. Angus & Associates and Sport New Zealand created databases of people employed in the sport and recreation workforce and of New Zealand sport and recreation organisations, who were invited to complete the online Value of Sport Survey. Final samples of 346 members of the workforce and 121 members of the organisations were achieved by February 2017.

Outcomes frameworks verified by stakeholders. Sport NZ used the stakeholder engagement conducted by Angus & Associates (2017) to prepare an outcomes framework for the play, active recreation and sport sector. This was published as Sport New Zealand (2019). Further stakeholder engagement was undertaken by Sport NZ to prepare an outcomes framework for Māori participants, published as Sport New Zealand (2022). These were verified by Sport NZ in meetings with representative stakeholders, and the public were also able to respond through an email address provided on the Sport NZ website. Chapter 5 presents these frameworks. It also introduces the Treasury's Living Standards Framework and the outcomes framework developed by Sport NZ for its flagship programme delivered with Māori communities since 1995 (He Oranga Poutama).

The results of these engagements were synthesised into an outcomes map, which is explained in chapter 6 of this report. It guided the SROI analysis in chapters 7 and 8, as well as an analysis of Māori outcomes which stakeholders identified as not suitable to be monetised (reported in chapter 9). The final element of stakeholder engagement involves publishing this report in February 2023, after which Sport NZ will seek feedback in meetings with representative stakeholders and accept comments from the general public.

CHAPTER 3: LITERATURE REVIEW

3.1 Introduction

In recognition of the foundations laid down by existing studies on the value of sport and recreation in Aotearoa New Zealand, and the limitations of the evidence base resulting from the omission of research relating to the value of physical activity to Māori, our starting point for the SROI was to expand the literature review of Angus & Associates (2017) with our own review. The focus was to review and synthesise existing evidence around the relationship between sport and recreational physical activity, including both participation and volunteering, and wellbeing outcomes for tangata whenua and all New Zealanders.

The previous literature review was commissioned as part the *Value of Sport* research published in Sport New Zealand (2017). We undertook a series of searches for relevant literature (including academic literature and unpublished grey literature) produced since that research (that is, from 2017 onwards), including literature concerning Māori that might have been overlooked in a standard search.

We included in the scope relevant studies that use quantitative or qualitative methods or examine 'subjective' impacts, to enable us to provide a full picture of the existing evidence base. However, for the SROI we were particularly interested in literature which provides quantitative evidence, and any literature which places a value on the impact of sport and recreational physical activity.

The findings of the review are grouped into five key outcome areas: physical health; subjective wellbeing; individual development; personal behaviour; and social and community development. The following sections summarise the key findings of the review for each outcome area. The full literature review is presented in an accompanying report.

3.2 Physical health

The evidence around the impact of sport and recreational physical activity on physical health was generally of a higher quality than that found in the other outcome areas, based on more rigorous and robust methodologies. This is at least partly due to health outcomes being more easily quantified than the other outcome areas.

Chronic disease and illness

There is some evidence to show physical health benefits in terms of prevention or delay of chronic illness for both adults and children. The Value of Sport review (Sport New Zealand, 2017) found literature which identified relationships between physical activity and reducing type 2 diabetes, high blood pressure, cardiovascular disease, and obesity related disorders. The literature also showed that regular physical activity results in similar outcomes for children, including improved cardiovascular fitness, decreased risk of type 2 diabetes,

improved bone health, and maintaining a healthy weight. In addition, there was at least moderate evidence of physical activity having beneficial impacts on rates of breast cancer, colon cancer, osteoporosis and stroke.

Our review found three further studies (Maddison et al., 2019; Shultz et al., 2014; Sushames et al., 2016) demonstrating some positive impacts of sport and recreational physical activity on chronic or long-term disease and including helping obese or overweight people to lose weight and address other related cardio-metabolic risk factors, although these were all based on small sample sizes and demonstrated a need for further research to evidence these impacts.

Healthy ageing

There was a small amount of evidence on healthy ageing with just two studies demonstrating the benefits of sport and physical activity for older adults. These include a control group study (Campbell et al., 1999), which showed evidence of positive impacts on balance and strength, resulting in reduction of falls. Secondly a smaller scale study by Boyes (2013) found that older adults reported physical health benefits in the form of improved sleep, prevention/delay of illness, improved functional ability, reduced chance of falling, being stronger with better endurance, having better flexibility, better balance and co-ordination.

Mental health

There is research providing evidence for physical exercise as an effective treatment for unipolar depression (Kvam et al., 2016). We also found some anecdotal evidence around some self-reported impacts on stress and anxiety.

3.3 Subjective wellbeing

There was a reasonably high volume of papers highlighting subjective wellbeing benefits of sport and recreational physical activity. However, these papers were much more likely to be lower in quality, or based on anecdotal or self-reported evidence than those which examine physical health outcomes. It should be noted that the majority of papers found which focus on these type of subjective wellbeing outcomes were focused on Māori communities.

Holistic wellbeing and Māori culture

Papers focused on Māori communities typically emphasised it is not simply that participation in sport and recreation helps to develop positive feelings of wellbeing, but, the whole experience of sport and physical activity is inclusive of Māori culture, traditional knowledge systems, values and beliefs, all of which foster a more holistic sense of health and wellbeing (for example, Akbar et al., 2020; Rangj, 2021; Palmer et al., 2022; Severinsen and Reweti, 2021). As such, there are many links between the findings in this section, and those in the section below on the outcome area of social and community development.

Participation of Māori as Māori

A key theme in the recent literature is the importance of the ability of Māori to participate *as Māori*. Participating as Māori requires a recognition of Māori understandings of holistic wellbeing (hauora), This is discussed, for example, by Severinsen and Reweti (2021) in the context of the sport of waka ama.

Measures of wellbeing

The review found some studies which did use some more specific measures of subjective wellbeing, or more specifically described wellbeing benefits. These included Richards et al. (2018) who found that those people who met the global physical activity recommendations had 51% higher odds of having a healthy mental wellbeing and scored better on the WHO ‘at-risk’ threshold that indicates further mental health assessment is required. Further studies found that older adults self-reported improved cognitive performance, better memory, feelings of control, positive effects on negative emotions, enjoying life, delaying ageing, and life satisfaction (Boyes, 2013); and women reported increased self-efficacy and positive body image (Walters and Hefferon, 2020).

There are two studies based in New Zealand that provide monetary values on subjective wellbeing outcomes (Simetrica Jacobs, (a) and (b)). These provide different valuations of wellbeing from sport in New Zealand, both involving an instrumental variable approach which identifies the income equivalent of the utility gain (or loss) which sport participation bestows on individuals. First is a methodological note (Simetrica Jacobs (a)) which identifies wellbeing values for different levels of sport and exercise. Second, in what is termed a ‘proof of concept’ in monetising the value of sport to wellbeing, Simetrica Jacobs (b) estimate the effects of sport on several of New Zealand’s Living Standards Framework domains, and through these on wellbeing. In addition, the authors estimate the monetary value of the secondary effects of sport on wellbeing for the health domain (i.e. through indirect financial savings), using the New Zealand Treasury’s CBAx model, a form of cost-benefit analysis. However, it must be noted that this proof of concept is not able to use New Zealand data, but instead uses UK data. It is not therefore likely to be accurate for Aotearoa New Zealand and importantly is not able to differentiate values for different ethnic groups in Aotearoa New Zealand.

3.4 Individual development

In comparison to other outcomes, the volume of evidence found around the impact of sport and recreational physical activity on individual development is small and mixed in quality. The papers are grouped into two areas: firstly, papers which highlight impacts upon the development of academic or educational skills or achievement; and secondly, papers referring to the impact upon people’s performance and skills at work or through volunteering.

Monetary value of physical health outcomes

The papers found also include five assessments of the monetary value of the impact of sport and recreational physical activity on physical health outcomes, although these are mixed in scope and only three of these papers are based on the impacts for Aotearoa New Zealand. Of the international papers, Garrett et al. (2011), through a systematic review of international literature, found that most interventions to increase physical activity were cost-effective, especially where direct supervision or instruction was not required; and secondly, KPMG (2018; 2020) used a disability adjusted life years methodology and estimated that community sport infrastructure generated an annual value of \$4.9 billion worth of overall health benefit to Australia.

The papers focused on Aotearoa New Zealand offer an estimate of the impact in terms of health and economic gains, should physical activity targets be met. The studies differed in the target population. Mizdrak et al. (2021) estimated the gains that would accrue over the lifetime of the 2011 New Zealand population, were the WHO Global Action Plan for Physical Activity (GAPPA) targets met. Rush et al. (2014) estimated the expected increases in Quality Adjusted Life Years due to avoidance of obesity-related health conditions, and the reductions in health treatment costs, as a result of primary school pupils participating in the Project Energize Programme. However, this study did not isolate the impact of increased physical activity as this was combined with healthy eating.

Finally, a report by Waka Kotahi, New Zealand Transport Agency (2020) identifies three types of health-related cost attached to physical inactivity, which would be avoided by physical activity. First, health life quality and expectancy values are estimated from two different methods: disability life years, and morbidity and mortality costs. These values are related to eight health conditions which are proven to benefit from physical activity, i.e., heart disease, stroke, two types of cancer and depression. Second, the direct health system costs are taken from a study of inpatient data from the Ministry of Health (Market Economics, 2013). Third, the same Market Economics study reports on lost output cost arising from physical activity. This Waka Kotahi (2020) report therefore offers the most comprehensive evidence of the health-related costs of physical inactivity, i.e., the value of physical activity, using New Zealand data, and is therefore the principal source of such value used in our SROI model.

Educational outcomes

We found a low number of papers relating to the impact of sport and recreational physical activity on educational outcomes, and those papers that were found were mixed in quality – often being anecdotal, for example, or based on qualitative research in which people describe that they believe sport and recreational physical activity has an impact, but this is not specifically measured in terms of the exact impact on attainment levels, grades or performance (for example, Banville et al., 2017; Owen et al., 2022).

Both the qualitative and quantitative research undertaken as part of Sport New Zealand's (2017) Value of Sport research found that New Zealanders believed that sport can have educational outcomes through providing a platform for achievement, which helps build confidence, giving young people a sense of worth, pride and confidence. Whilst this is discussed in relation to achievements in sport, it appears to be assumed that developing these qualities through sport can translate into academic performance. The quantitative survey showed that 88% of respondents believed that sport and other physical activities provide people with opportunities to achieve and help build confidence. In addition, 88% believed that many essential life skills are developed playing sport, including how to interact with others, how to work as a team, how to share, how to compete, how to win, how to lose. Respondents identifying as Māori were more likely to report a range of personal impacts including life skills. Māori respondents also were more likely than others to report that sport and active recreation had helped their dependents develop important life skills (72%, compared with 59%).

The review found one study that tested the effect of physical activity, in the form of dance, on children's selective attention in school (Kulinna et al., 2018) and which concluded that existing school opportunities focused on cognitively engaging physical activity, such as dance, can improve aspects of students' selective attention.

Employment and volunteering outcomes

The review found two papers relating to work performance, with one of these (Williden et al., 2012) based in Aotearoa New Zealand, which assessed individual health behaviours against measures of work performance and found that the impact of psychological distress, physical inactivity, and smoking on productivity suggests that employers might benefit from contributing to health promotion within the workplace. One study that attempted to quantify cost savings from higher productivity as a result of participation in sport is reported in KPMG (2018, 2020), based on the Australian population. It estimated that the impact of sport on increased productivity is \$0.8b annually. The report stated that by participating in sport, individuals are mentally and physically healthier and have enhanced cognitive performance. As a result the economy is, on average, more productive. This is said to be delivered through a number of mechanisms, including lower absenteeism from work, greater personal productivity and increased human capital (personal skills and ability).

In terms of volunteering, the review uncovered just one paper (GEMBA, 2015) which provides some insights into the demographics of New Zealand sports volunteers, the capacity in which they volunteer, and their motivations for volunteering, and it was found that volunteers that were aged 24 years or younger were more likely to be motivated to volunteer in order to gain new skills and to improve their employment opportunities. The report did not show, however, what skills were developed, and whether or not volunteering did indeed improve employment opportunities, as was anticipated.

3.5 Personal behaviour

The papers grouped under the outcome area 'personal behaviour' include papers relating to pro-social behaviour, anti-social behaviour and crime. The review found that this outcome area is limited in evidence in comparison to the other areas, as well as mixed in the quality of the research found.

There were three papers (Gordon et al., 2013; Sport New Zealand, 2018; Wheaton et al., 2017) relating to studies based in Aotearoa New Zealand. These showed that people believed that sport and recreational physical activity had the outcomes of the development of useful life skills and improving life chances, including through developing good character, team building, goal setting, anger management, building discipline and self-esteem. The findings showed that people believed sport could have a positive outcome for young people in deterring them from anti-social behaviour and 'keeping them off the streets'.

Jugl et al. (2021) undertook a systematic review and meta-analysis aiming to explore knowledge about the effectiveness of sports programmes as measures of crime prevention. The study found a moderate effect of participation in sports programmes on crime-related outcomes. Participants showed a significant decrease in outcomes such as aggressiveness or anti-social behaviour. It should be noted that the review included studies which evaluated sport-for-development interventions which were designed to have such outcomes around preventing crime and anti-social behaviour. Therefore, it is unclear if the results translate to participation in general sport programmes.

3.6 Social and community development

Evidence around the impact of sport and recreational physical activity on social and community development in Aotearoa New Zealand is by far the largest in volume of all the outcome areas studied in this literature review. The volume of literature reviewed in this area was significantly greater than in other similar international reviews of literature.

Many of the papers in this section relate to Māori communities, which suggests that, for Māori, this is an important outcome of sport and recreational physical activity. There is also considerable crossover with the outcome area of subjective wellbeing, for the evidence suggests that feelings of wellbeing are often developed through social connections, and feelings of identity and culture, that are built around sport (for example, Sport New Zealand, 2019b; Marsters et al., 2020).

The papers reported in this section are mostly based on qualitative research demonstrating subjective impacts.

Social connections

Many papers found in this review demonstrate the ways in which involvement with sport and recreational physical activity can develop social connections. This includes through feelings of

belonging and inclusion amongst family and friends and enabling individuals to meet new people and make new friends. In this way, sport can be seen as a form of ‘bonding social capital’, a type of capital that describes connections within a group or community amongst people who have similar characteristics or close relationships.

The studies found which focussed on social connections are subjective and based on the self-reporting of this as an outcome of sport. Sport New Zealand’s (2017) *Value of Sport* report found that 52.5% of participants indicated that social reasons were their main reason for taking part. The report also described that sport brings people within communities together and helps to make friends and develop networks. Across all the survey respondents, 73% were of the opinion that sport and physical activity helps build vibrant and stimulating communities, but this view was stronger amongst Māori respondents, for whom 80% believed sport and physical activities help build vibrant and stimulating communities.

Papers showed positive impacts reported for older adults in the form of social support, making friends and feeling integrated as a community (Boyes, 2013), for young people through developing friendships, a sense of who they are among others (an appreciation of their own strengths and weaknesses), a sense of belonging (when accepted and appreciated by others) and a sense of community (when valued by a team) (Shultz et al., 2014; Smith et al., 2021). A further paper (Sengupta et al., 2013) demonstrated the impact of sport and recreational physical activity had a significant impact on feelings of community for adults over 18.

Three papers show the importance of sport for family bonding (Gordon et al., 2013; Akbar et al., 2020; Portaluri, 2017). These papers showed that people believed that sport provided important opportunities for social interaction and the opportunity to meet and socialise with family and community. Portaluri (2017) described how a Māori rugby team behaves as a whānau, a Māori family (widely defined, well beyond a single household), in which ceremonial customs and collective Māori principles are closely observed: reciprocity, support (awhi), hospitality and unity (kotahitanga) are comprised in rugby camaraderie.

Civic engagement and governance

The literature review identified a small number of papers showing ways in which sport and recreational physical activity brings groups of people or communities together with a common goal or a common action. This demonstrates an impact on ‘bridging social capital’, which is a type of capital that describes connections that link people across areas that might typically divide society (such as race, class, gender or religion), or between groups or organisations.

Sport New Zealand’s (2017) *Value of Sport* report describes some evidence internationally which shows that sport and physical activity can help develop feelings of belonging and inclusion, particularly for migrant populations. The review also found evidence that sport and

recreational physical activity can help foster feelings of community pride (KPMG, 2018, 2020; Dowden and Mitchelmore, 2010; Sport New Zealand, 2018). These papers describe mostly qualitative research to gather perceptions around the impact of sport, and KPMG, for example, calls for further research to quantify the impacts in this area, including measurement of levels of social trust in a community, for example.

Cultural identity

The review also found a group of papers which focus specifically on the ways in which sport and recreational physical activity may foster feelings of cultural identity. In particular, some of these papers explore how the ability to participate in traditional Māori sports, or in sport more generally, *as Māori* might reinforce Māori culture and identity, particularly on the value of whanaungatanga (sense of belonging).

These papers are based on case studies of either specific interventions (Smith et al., 2021; Sport New Zealand, 2019a), or specific sports teams, for example Hapeta (2018) and Hapeta et al., (2019) showed how incorporating Māori concepts into rugby team strategy and development brought a greater sense of unity, benefitted wellbeing (identity and leadership) in the team environment, but also in other contexts outside of sport in the wider community.

3.7 Summary

- This literature review found evidence of mixed volume and quality on the extent to which sport and recreational physical activity contributes to wellbeing outcomes in Aotearoa New Zealand.
- Of the papers found, the largest volume of literature was around social and community development, followed by physical health. For the other identified outcome areas of subjective wellbeing, individual development and personal behaviour, there were smaller volumes of literature.
- In terms of the quality of evidence available, physical health is the strongest area in terms of the quality of evidence, and the area for which the review found the most examples of research demonstrating the monetary value of physical health outcomes. This is at least partly due to health outcomes being more easily quantified than the other outcome areas.
- It should be noted however that, in all of the outcome areas, there is still a fairly small amount of evidence on which to base definitive conclusions, and in all areas, there is a mixed quality of evidence. The majority of studies use cross-sectional data.
- Also, as studies are mostly based on very specific sub-groups or social demographic groups it is difficult to make comparisons between studies, and it is also not possible to generalise the results across the population.
- Similarly, where studies covering one outcome area use validated and recognised measures, they all tend to use different measures, meaning it is difficult to make comparisons.

- Despite the varying volumes of existing literature and the variations in the quality of the evidence available, there is nevertheless some compelling and useful evidence which does show some examples of the links between sport and recreational physical activity and wellbeing outcomes in each of the areas for specific sub-groups, including for Māori communities.
- The evidence based on research with Māori communities indicates that the ability of Māori to participate *as Māori* fosters a sense of wellbeing, particularly through strengthening social connections and feelings of identity and culture that are built around sport and physical activity. This evidence is mostly small-scale and qualitative, based on subjective impacts.
- There is clearly a need for further research to help to quantify the impacts of sport and recreational physical activity in all outcome areas, and to strengthen the existing evidence base.

These results generally reinforced the conclusions found by Angus & Associates (2017). Both reviews were used to create the outcomes map described in chapter 6 of this report.

CHAPTER 4: STAGE 1 - STAKEHOLDER IDENTIFICATION

4.1 Introduction

Stakeholders are those people or organisations who affect or are affected as a result of an activity. They are an integral part of the measurement process. Stakeholders help to define the scope of an SROI project and identify the inputs and the outcomes to be measured. The information they provide helps to develop the outcome map and they also contribute to verifying the research process and findings.

As described in the Standard on applying Principle 1 (Social Value International, 2019a, p. 2), 'Involving stakeholders is at the heart of accounting for value'. Accounting for social value should always start with stakeholders' perceptions of outcomes (**what has changed for them as a result of participating/volunteering in active recreational physical recreation (APR)**) and involve a sample in **understanding the value or importance they place on these outcomes**. Speaking directly to stakeholders is not the only source of relevant information in an SROI. Third party research and published academic and grey literature are also important sources of information to triangulate what is heard from stakeholders.

For this project, the research team recognised that Sport NZ has its own stakeholder engagement programme, which it had used in its own internal identification of outcomes from play, active recreation and sport (see chapter 5), prior to the start of this study. All stakeholders' views are relevant, of course. The risk of relying solely on the views of staff from Sport NZ are:

- They may not know all of the outcomes that stakeholders experience; They use language that is more generic and does not accurately reflect specific stakeholders' experiences, and this can lead to outcomes that are not well defined being measured; and
- They may exclude or explain away any negative outcomes that are experienced (no causality, not relevant, activity not understood, etc.).

The risks of relying solely on other stakeholders are:

- Some stakeholders may not be well informed;
- They may have short-term priorities, restricting their ability to consider longer-term outcomes; and
- Within any group, some people may have their views heard more effectively than others.

The project provided for a mix of 6-8 consultations with stakeholders, which highlighted the need to prioritise consulting with those experienced or knowledgeable of material change, and whose views and experiences are not comprehensively documented in the literature

reviewed in chapter 3. Hence, the research team worked with Sport NZ staff to draw up a list of key stakeholders, and to select a shorter list for interview by the research team. This chapter describes the initial consultation with Sport NZ and the process that led to the selection of the stakeholders for interview.

4.2 Initial meeting with Sport NZ

The research team met with staff of Sport NZ on 24 November 2021. This was a hybrid meeting, with a mixture of participants physically present and participants joining online. The purpose of the meeting was to identify key stakeholders with knowledge of the outcomes from investment in physical recreation.

The Toihautū - Principal Advisor Māori at Sport NZ explained that Sport NZ is pursuing a Waka Hourua Partnership Model as part of its commitment to Tiriti o Waitangi principles of partnership, protection and participation. The model is explained in Sport New Zealand (2020, p. 1).

Waka hourua are double hulled waka, the largest and sturdiest of our waka designed to travel great distances and withstand the harshest conditions. While the hulls are separate, they are joined together by a common space. It is essential that the hulls are balanced and strong. They are both part of the same waka. If one hull is weak the whole waka is compromised.

In this model, the two hulls contain the two Tiriti partners, with the partners in each hull holding their own mana and given the time and space to bring their unique perspectives, knowledge and experience to the partnership in their own way (idem, p. 2). The Tiriti partners come together in the common space or bridge between the two hulls, called the papa noho (which also provides the name of this Sport NZ report). Sport NZ has learned that ‘while there may be two hulls, they are part of the same waka and by default must head in the same direction’ (idem, p. 3).

Nevertheless, it is clear that Māori and Pākehā are not at the same starting point.³ This is summarised in the *Papa Noho Report* (idem, p. 7):

For both parties to succeed on this journey demands a reflection that for Māori, their desired future looks similar to that which Pākehā have today. Te Tuarā [a Sport New Zealand working group that explored possible futures] therefore outlined their priority milestones centred around achieving equality (Mana Ōrite) and equity (Mana Taurite). It is sobering to think that one partner’s aspirations are to just get to where the other partner already is.

³ For international readers, ‘Pākehā’ is the Māori language term that emerged to describe the new arrivals from Europe in the early nineteenth century. It continues to be an accepted term for non-Māori New Zealanders of European ancestry, particularly in the context of discussions about the two partners who signed Te Tiriti o Waitangi in 1840.

The meeting on 24 November recognised that considerations have profound implications for stakeholder engagement. Because Māori and Pākehā are not at the same starting point, it was the responsibility of the research team to create stakeholder engagement processes for each hull of the Waka Hourua, respecting the cultural values of the people in each hull, to ensure that everyone is able to come together in a safe way.

Two initiatives within Sport NZ provided solid foundations for these processes. Lily Joiner is working on a stakeholder identification study, which is identifying connected organisations using headings such as those who enable, those who promote, and those who lead. Hamish McEwen at the meeting described groups associated with Central Government, Local Government, Regional Sports Trusts, National Sports Organisations, Recreation Providers, Commercial Providers, Academics, Parents and participants of all ages and abilities ('the team of five million').

The second initiative is the Sport NZ flagship programme He Oranga Poutama, which has been delivered with Māori communities, in various forms, since 1995 (McKegg et al., 2013, p. 8). This programme is intended to strongly centre on Māori cultural distinctiveness and support community leadership and participation grown in play, active recreation and sport as Māori. It is an example of tools designed by Māori to feed into wellbeing outcomes for Māori. Its success has been built on strong stakeholder engagement with Māori communities. There are other programmes based on kaupapa Māori principles, such as Tapuwaekura and MaraeFit Aotearoa.

4.3 Stakeholders identified with Sport NZ

Based on the discussion at the meeting, the research team prepared a stakeholder table for each hull in the Waka Haurua Partnership Model. This meant two exercises, one focussed on identifying Māori stakeholders and one focussed on identifying other stakeholders. The results are listed in Table 4.1. They provided a starting point to guide the next stage of the analysis.

Table 4.1: Stakeholders Identified with Sport NZ

Stakeholders	
Who and how many?	
Māori stakeholders	<p>Māori Communities Whānau, Marae, Iwi, Māori participants and volunteers</p> <p>Māori Organisations⁴ He Oranga Poutama, Whānau Ora, Māori National Sporting Bodies (e.g. Waka Ama), Māori sections in National Governing Bodies</p> <p>Māori Providers⁵ Kaupapa Māori Support Services, Kaupapa Māori Commercial fitness and exercise providers</p> <p>Public Sector Sport NZ Rautaki Māori, Māori Wānanga, Māori Kura, Māori academics</p>
Other stakeholders	<p>Consumer sector -Participants (adults and children) -Volunteers -Parents of children participating in physical activity</p> <p>Private / commercial sector -Commercial fitness and exercise providers -Employers with sport, exercise and physical activity facilities</p> <p>Community / third sector -Regional Sports Trusts -National Governing Bodies -Sport and recreation clubs -Charities delivering sport and physical activities -Other sport for development organisations</p> <p>Public sector -Sport NZ -Other central government agencies (e.g. Ministry of Education, Ministry of Health) -Local Government -Secondary schools -New Zealand Institute of Sport -Te Pūkenga (New Zealand Institute of Skills and Technology) -Universities</p>

4.4 Stakeholder interviews

As explained in section 2.4, Sport NZ had commissioned a major stakeholder engagement exercise, reported in Angus & Associates (2017) and Sport New Zealand (2017). The quality of that engagement was evaluated as high, but Sport NZ provided a budget for a further 6-8

⁴ Organisations with an interest in recreational physical activity but not directly involved in providing physical activity opportunities.

⁵ Organisations that deliver or enable provision of recreational physical activity opportunities.

stakeholder engagements by the research team, drawn from Table 4.1. It was agreed that these should include 3-4 Māori stakeholders, consistent with the waka hourua model. Ihi Research agreed to work with the Toihautū - Principal Advisor Māori at Sport NZ to determine the Māori participants in the interviews, and this process led to five interviews being agreed. The Māori stakeholders were selected as they demonstrate active physical recreation ‘as Māori’ determined by the Te Whetū Rehua framework based on five key values important for Māori cultural and social development (see ‘Te Whetū Rehua’ at <https://aktive.org.nz/media/e0amtp2o/te-whetu-rehua.pdf>). The AERU agreed to work with Rebecca Thorby (Senior Evaluation Advisor) to determine four interviews. Thus, the research team undertook interviews with nine stakeholders, listed in Table 4.2.

Table 4.2: Interviewed Stakeholders

Māori Stakeholders	Other Stakeholders
1. Sport Hawkes Bay – MaraeFit	6. Christchurch City Council – Recreation and Sports Unit.
2. Te Matatini	7. Exercise New Zealand.
3. Māori Touch New Zealand	8. Recreation Aotearoa – Te Whai Oranga.
4. Te Papa Tākaro – Te Arawa	9. School Sport New Zealand.
5. Toi Tangata – Māori Health NGO	

These organisations were chosen for their knowledge and experience in the sector, and to reflect the stakeholder groups identified in Table 4.1. This can be summarised briefly as follows.

1. Sport Hawkes Bay

Sport Hawke’s Bay is a regional sports trust, established in 1989. They manage and deliver a variety of programmes and services that promote sport and physical activity in the community; see the website at <https://www.sporthb.net.nz/About/Our-Team-2#>. They deliver ‘MaraeFit’ - a marae-centric initiative that provides opportunities for sport and recreation organisations, whānau, hapū and marae to increase their physical activities and capability in an ‘as Māori’ context; see website at <https://www.sporthb.net.nz/He-Oranga-Poutama-1/MaraeFit-Series-2> .

2. Te Matatini

Te Matatini is the most significant cultural festival and the pinnacle event for Māori performing arts in New Zealand. Held biannually, the competition features regional representative groups that compete in Māori song, movement and performance; see the website at <https://tematatini.co.nz/the-festival/>

3. Māori Touch New Zealand

Māori Touch NZ is a Māori sport organisation established in 1998. It sits under the umbrella of the parent organisation, the National Māori Touch Trust. The purpose of the Trust is to

support the aspirations of individuals, whānau (families), hapū (sub tribal), iwi (tribal) and urban Māori and to empower and strengthen Māori in tikanga (traditional protocols and practices), te reo (language), whanaungatanga (relationships) and hauora (health) through the game of touch rugby; see the website at <https://www.sporty.co.nz/maoritouchnz/History-1/tab1>.

4. Te Papa Tākaro o Te Arawa

Te Papa Tākaro o Te Arawa, an iwi organisation based in Rotorua, supports whānau based physical activity as a vehicle to connection and re-connect with mātauranga Māori (Māori knowledge). Founded on Te Arawa and Māori philosophies, Te Papa Tākaro O Te Arawa encourage a healthier lifestyle for Māori people of all ages through increased participation in physical activity, sport, nutrition and positive activity for people of all ages.

5. Toi Tangata

Toi Tangata is an Auckland based Māori agency that develops, delivers, and champions kaupapa Māori based approaches to kori (physical activity) and kai (nutrition); see the website at <https://toitangata.co.nz/about/>. Toi Tangata specialises in healthy living and healthy learning based on Māori knowledge. They develop and provide nutrition and physical activity programmes and training opportunities for Māori whānau.

6. Christchurch City Council – Recreation and Sports Unit

The Recreation and Sports Unit of the Christchurch City Council is responsible for maintaining a wide range of outdoor and indoor facilities for physical recreation, including sport; see the website at <https://ccc.govt.nz/rec-and-sport/>. Christchurch City is the second largest local authority in New Zealand by population, behind Auckland City.

7. Exercise New Zealand

Exercise New Zealand is Aotearoa's peak body supporting the exercise community, helping more people become physically active through exercise; see the website at <https://exercise.org.nz/>. It supports exercise businesses and professionals (including operating New Zealand's Register of Exercise Professionals) and promotes safe exercise to the general public.

8. Recreation Aotearoa – Te Whai Oranga

Recreation Aotearoa – Te Whai Oranga is a registered charity championing high quality recreation for the benefit of New Zealand; see the website at <https://www.nzrecreation.org.nz/Site/about/>. Its work programme includes advocacy, the advancement of education in recreation and leisure, and efforts to encourage the conservation and efficient use of natural resources and the safe administration of recreation spaces.

9. School Sport NZ

School Sport New Zealand is the sports service organisation that co-ordinates, promotes and protects secondary school sport for all students; see the website at <https://www.nzsssc.org.nz/about-1/about-1>. It is established by schools, to act as guardian of the heritage and the values of secondary school sport and to deliver leadership and support for all involved in the provision of sport to secondary schools and their students.

The stakeholder interviews took place in March and April 2022. Insights from these interviews are discussed in sections 5.6 and 5.7 of the following chapter. The evidence collated during the interviews was verified by stakeholders.

The main exclusions of stakeholder groups from involvement in the primary research was participants and volunteers. This exclusion was for two reasons. First, insufficient budget to conduct primary research of sufficient scale to gain a representative sample (there are 1,853,333 adult participants). Second, the good availability of secondary data and literature pertaining to the key issues and outcomes for participants and volunteers (e.g., Simetrica Jacobs (a) and (b)).

CHAPTER 5: UNDERSTANDING WHAT CHANGES

5.1 Introduction

SROI Principle 2 requires the analysis to ‘articulate how change is created’, including unintended changes (Social Value International, 2021a, p. 4). In the language of SROI, these changes are ‘outcomes’. There are three parts to understanding what changes:

Part One: Creating well-defined outcomes

Part Two: Designing indicators (metrics) to measure the outcomes

Part Three: Measuring the outcomes

The Standard on applying Principle 2 records that this principle is pivotal, and closely intertwined with many of the other principles (Social Value International, 2021a, p. 3). Thus, the research team spent significant time creating well-defined outcomes for recreational physical activity in Aotearoa New Zealand. This chapter describes how this was done; chapter 6 presents the resulting outcomes map.

5.2 Defining outcomes

The ultimate aim of Social Value International is to “reduce inequality and environmental degradation and improve wellbeing” (Social Value International, 2021a, p. 6). It adopts a definition of wellbeing offered by the New Economics Foundation:⁶ “Well-being is most usefully thought of as the dynamic process that gives people a sense of how their lives are going, through the interaction between their circumstances, activities and psychological resources or ‘mental capital’.”

In that context, the Standard on applying Principle 2 states “**a well-defined outcome describes a specific change for someone (or a group of people) that provides the best opportunity to increase or decrease value**” (idem, p. 6). It lists five main types of change that people can experience (ibid):

- a) Circumstance
- b) Behaviour
- c) Capacity
- d) Awareness
- e) Attitude

An open questioning approach is best to identify outcomes with stakeholders. This involves prompts such “what changed for you as a result of the activity?” and “what happened next?”, without any predetermined domains for potential outcomes (idem, p. 12). The second

⁶ See <http://www.nationalaccountsofwellbeing.org/learn/what-is-well-being.html>.

question recognises that an outcome can lead to further outcomes in a chain of events triggered by the activity. Increased participation in physical activity, for example, might lead to better physical and mental health, which might lead to reduced demand for health services, which might release resources for other health benefits, which might all lead to improved personal, family and community wellbeing.⁷

5.3 The Sport NZ Outcomes Framework

In 2018/19, Sport NZ developed an outcomes framework to set the direction to 2032 for Sport NZ and for the wider play, active recreation and sport sector (Sport New Zealand, 2019, p. ii). This happened at the same time that the Treasury was preparing the second version of its Living Standards Framework (Treasury, 2018).⁸ Sport New Zealand (2019) aligned its outcomes map to the Treasury's framework, while recognising that the Living Standards Framework is essentially a western cultural model of wellbeing. Sport NZ therefore prepared Te Pākē o Ihi Aotearoa as a Māori outcomes framework (Sport New Zealand, 2022; see section 5.4 below).

Consistent with the approach of Social Value International, the ultimate aim of the Sport NZ outcomes framework (hereafter referred to as SNZOF) is to identify impacts on wellbeing (Sport New Zealand, 2019, p. 3). Again consistent with the Social Value International approach, the framework recognises that intermediate outcomes lead to long-term outcomes, leading to impact on wellbeing.

The Living Standards Framework (hereafter referred to as LSF) identifies 12 domains of current wellbeing, and four foundations for future wellbeing. SNZOF adopts eight of the domains and two of the foundations as relevant for the impacts of Sport NZ's contributions to wellbeing impacts.⁹ Table 5.1 lists these items, presenting the names used in the 2018 and in the 2021 versions of the LSF, along with the definitions presented in the 2021 version. Note that these names are not themselves outcomes but define domains where the outcomes will be found. Further, the foundations for future wellbeing are areas where the value from public investment is likely to be high. This is because changes in human capability and social cohesion produce life-long benefits whose aggregate net present values can be substantial.¹⁰ Within the list of relevant domains, Sport NZ identified three where their activities make a distinctive contribution.

⁷ In some contexts, the ultimate change on an aspect of wellbeing in a chain of events is called the 'impact' of the outcomes; see, for example, MBIE (2019).

⁸ The Treasury has released a third version of its framework (Treasury, 2021), which the authors have incorporated into this section where appropriate.

⁹ The domains considered not relevant were: housing; income and consumption; jobs and earnings; and safety. The foundation considered not relevant were: natural capital; and financial and physical capital.

¹⁰ Net present value is an economics technique for aggregating future benefits into a present equivalent value. Investment in increasing the human capability of young people can lead to substantial benefits, see Dalziel, Saunders and Guenther (2018).

Table 5.1: Domains and Foundations of Wellbeing Relevant to Sport NZ

Name use in LSF 2018	Name used in LSF 2021	Definition in LSF 2021
DOMAINS OF CURRENT WELLBEING		
Knowledge and Skills	Knowledge and Skills	Having knowledge and skills appropriate to one’s life stage and continuing to learn through formal and informal channels.
Health	Health	Being in good mental and physical health and exhibiting health-related behaviours and lifestyles that reduce morbidity and mortality, such as eating well and keeping active.
Social Connections	Family and Friends	Loving and supporting close friends, family and community members, and being loved and supported in turn.
Subjective Wellbeing	Subjective Wellbeing	Being satisfied with one’s life overall, having a sense of meaning and purpose, feeling positive emotions, such as happiness and contentment, and not feeling negative emotions.
Civic Engagement & Governance	Engagement and Voice	Participating in democratic debate and governance at a national, regional or local level, such as through membership of a charitable society, political party or school board.
Environment	Environmental Amenity	Having access to and benefiting from a quality natural and built environment, including clean air and water, green space, forests and parks, wild fish and game stocks, recreational facilities and transport networks.
Cultural Identity	Cultural Capability and Belonging	Having the language, knowledge, connection and sense of belonging necessary to participate fully in one’s culture or cultures, and helping others grow their cultural capability and feel a sense of belonging.
Time Use	Leisure and Play	Using free time to rest, recharge and engage in personal or shared pursuits.
FOUNDATIONS FOR FUTURE WELLBEING		
Social Capital	Social Cohesion	The willingness of diverse individuals and groups to trust and cooperate with each other in the interests of all, supported by shared intercultural norms and values.
Human Capital	Human Capability	People’s knowledge, physical and mental health, including cultural capability.

Source: Sport New Zealand (2019) and Treasury (2021).

- **Knowledge and Skills:** Improved levels of physical literacy contribute to wellbeing; that is, improved “motivation, confidence, physical competence, knowledge and understanding required by participants that allows them to value and take responsibility for engaging in physical activity and sport for life” (Sport New Zealand, 2019, footnote 6, p. 9).
- **Cultural Identity / Ūkaipōtanga:** Improved proportion of people being physically active in the way they want to be contributes to wellbeing.
- **Time Use:** Improved proportion of leisure and recreation time spent being physically active contributes to wellbeing.

SNZOF identifies four long-term outcomes, which are presented in Table 5.2. This includes improvements in important dimensions of physical activity (frequency, intensity, time, and type) and improvements in the experience of participants, supporters, volunteers and the workforce. Sport NZ also aims to contribute to cultural vitality, and recognises that characteristics of the play, active recreation and sport system can itself produce wellbeing benefits.

Table 5.2: Long-term Outcomes in the Sport NZ Outcomes Framework

Name	Description
Physical Activity	Improved frequency, intensity, time and type of physical activity.
Experience	Improved experience of participants, supporters, volunteers and workforce.
Cultural Vitality	Increased variety of culturally distinctive pathways in physical activity for tangata whenua (Tū Te ihi, Tū Te Wēhi, Tū Te Wana) and all New Zealanders.
System	Improved system that is diverse, trusted and reflects Te Tiriti o Waitangi and the principles of Partnership, Protection and Participation.

Source: Sport New Zealand (2019), Figure 5, p. 11.

Sport NZ has used a socio-ecological model of behaviour change to identify intermediate outcomes that support the long-term outcomes in Table 5.2. The improvements sought by Sport NZ activities are grouped under five headings. This part of SNZOF is presented in Table 5.3.

Table 5.3: Intermediate Outcomes in the Sport NZ Outcomes Framework

Name	Examples	Improvements Sought
Individual Factors	Knowledge, confidence, motivation, competence	<ul style="list-style-type: none"> • Value of doing physical activity • Understanding of the benefits of physical activity • Value of volunteers, supporters and workforce that support physical activity
Personal Relationships	Family, friends, coaches, teachers	<ul style="list-style-type: none"> • Engagement in physical activity • Encouragement to participate in physical activity • Provision of direct support to participate in physical activity
Social and Cultural Norms	Organisational practice, community structure, cultural background	<ul style="list-style-type: none"> • Diversity in the range of organisations promoting opportunities for physical activity • Organisational cultures that enable physical activity • Use of existing social structures and institutions to develop local initiatives
Physical Environment	Spaces and places, infrastructure access	<ul style="list-style-type: none"> • Access to physical activity options that are safe • Connections between people through physical activity settings • Connections between people their surrounding environment through physical activity
Policy	National regulations, organisational policies	<ul style="list-style-type: none"> • Leadership and advocacy to support everybody to be active • Implementation of national and regional regulations to ensure sector integrity • Application of evidence-based guidelines to improve physical activity

Source: Sport New Zealand (2019), Figure 6, p. 14.

5.4 Te Pākē o Ihi Aotearoa

Sport NZ recognised that its Outcomes Framework described in the previous section draws on the principles of biculturalism (including engagement with Māori in its preparation and threading principles of the Treaty of Waitangi throughout the Framework) but is essentially a western cultural model of wellbeing. The Outcomes Framework document acknowledges that further work was required to create a true bi-cultural model (Sport New Zealand, 2019, p. 3).

Consequently, Sport NZ's Toihautū (Principal Māori Advisor) led a process to create a Māori Outcomes Framework, summarised in a document entitled Te Pākē o Ihi Aotearoa. The aim of the document is described as follows (Sport New Zealand, 2022, p. 6):

Te Pākē will sit alongside the Sport NZ Outcome Framework in the spirit of Mana Ōrite (Partnership). It both strengthens and aligns with the long-term outcomes in the Sport NZ Outcomes Framework - Cultural Vitality and System – and the ultimate

vision of Sport NZ Ihi Aotearoa, Every Body Active, by ensuring Tangata Whenua are enabled to participate and succeed as Tangata Whenua.

Figure 5.1 reproduces the summary figure of the Māori Outcomes Framework presented in Te Pākē o Ihi Aotearoa. It is a rich document, imbued with knowledge and meaning that can be conveyed only in its Māori vocabulary within a Māori worldview. Nevertheless, some features of the framework need to be acknowledged as part of the current study.

Figure 5.1: Te Pākē o Ihi Aotearoa (Sport NZ Ihi Aotearoa Māori Outcomes Framework)



Source: Sport New Zealand (2022), p. 8.

First, the first line in the framework records the overarching principle, Tangata Whenua are enabled to participate and succeed as Tangata Whenua. Tangata Whenua can be translated as ‘People of the Land’, used exclusively as a name for the Indigenous peoples of Aotearoa New Zealand. This principle recognises the autonomy of Tangata Whenua in determining how to participate and succeed in play, active recreation and sport.

A second point to note that upholding the honour of Te Tiriti o Waitangi (New Zealand’s founding document) is listed as an outcome in its own right, under the heading Te Whakamana i te Tiriti. This outcome requires progress in the three Tiriti principles accepted by the Crown: Mana Ōrite (Partnership), Mana Māori (Protection) and Mana Taurite (Participation).

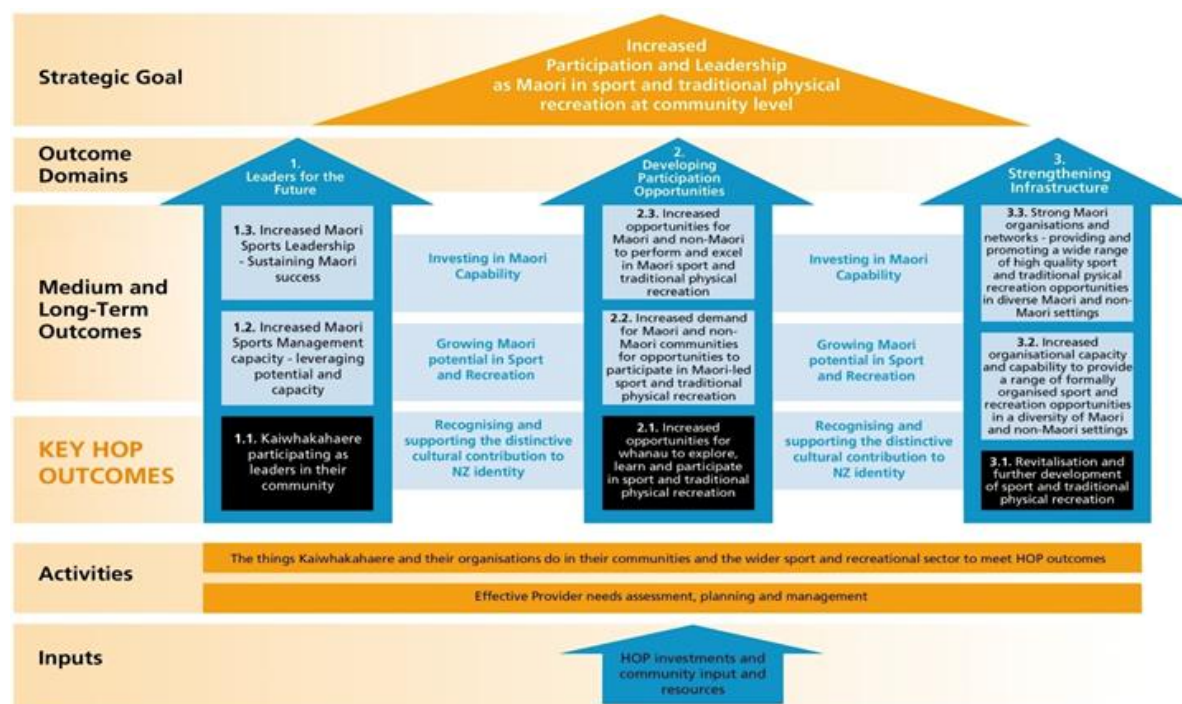
The remaining two major headings are Mauri Tū and Mauri Ora, which together make up an ancient proverb or saying that in this context encapsulates a Māori worldview of physical activity and wellbeing (Sport New Zealand, 2022, p. 13). Mauri Tū expresses outcomes related to culturally capable and Te Tiriti-led behaviours in Sport NZ Ihi Aotearoa and the wider play, physical recreation and sport sector. Mauri Ora expresses outcomes in which Māori participants are able to give full expression to cultural identity, cultural connection and cultural vitality.

5.5 He Oranga Poutama Outcomes Framework

He Oranga Poutama is a Sport NZ flagship programme delivered with Māori communities in various forms since 1995 (McKegg et al., 2013, p. 8). This programme uses an outcomes framework to guide its activities, which is reproduced in Figure 5.2. The overarching strategic goal is 'increased participation and leadership as Māori in sport and traditional physical recreation at community level.

Under that strategic goal, outcomes are organised into three domains: (1) leaders for the future; (2) developing participation opportunities; and (3) strengthening infrastructure. The key programme outcomes in the diagram reflect the social nature of investment in Māori physical recreation. The first outcome is that kaiwhakahaere (organisers) are participating as leaders in their community. The second is increased opportunities for whānau (families, widely defined) to explore, learn and participate as Māori. The third is revitalisation and further development of sport and traditional physical recreation.

Figure 5.2: He Oranga Poutama Outcomes Framework



Source: <https://sportnz.org.nz/kaupapa-maori/e-tu-maori/he-oranga-poutama-outcomes-framework/>.

5.6 Māori stakeholder interviews

Five Māori stakeholders were interviewed. They were chosen in partnership with the Toihautū (Principal Advisor Māori at Sport NZ). Prior to the interview a copy of the questions was emailed to the participants with an invitation to consent to their participation. All interviews were conducted via online hosting due to the pandemic restrictions during the time of this research.

The interviews were predicated with a review of reporting documents from the He Oranga Pounamu funding stream. Four He Oranga Poutama Partners (2 iwi organisations, 2 Regional Sports Trusts) were selected, 5 reports for each organisation were reviewed from 2016 through to 2020 (20 reports in total). The goal of He Oranga Poutama investment has been to achieve increased participation and leadership 'as Māori' in sport and traditional physical recreation at community level (Thompson, 2021). The outcomes from these reports were used to contribute to the evidence of outcomes.

The interviews took between 30 minutes and an hour, based on four areas of questions: beneficial changes; negative or unintended changes; ranking of outcomes; major costs/inputs. The full list of questions is provided in Appendix A2.

Māori wellbeing

In line with a Māori centred research approach, the interviews were analysed in keeping with Māori constructs of health, wellbeing and participation. The way Māori view wellbeing is

different from the way other New Zealanders view wellbeing. It is informed by te ao Māori (a Māori world view) where, for example, whenua (land) is not seen just for its economic potential, but through familial and spiritual connections defined by cultural concepts such as whakapapa (genealogy) and kaitiakitanga (stewardship) (Te Puni Kōkiri and Treasury, 2019).

Māori understandings of health and wellbeing are reflective of other Indigenous health frameworks. Total wellbeing includes dimensions other than physical – i.e. spiritual, mental, emotional, cultural health, all set within a context of environmental health. Simply focussing on physical health outcomes of sport is not sufficient for identifying wellbeing benefits. Sir Mason Durie described holistic well-being as a: *“perspective incorporating four distinct shared dimensions of life... spiritual, intellectual, physical and emotional. Linking these fundamental dimensions...manifests itself on multiple levels where the past, present and future co-exist simultaneously”* (Durie, 2003, p. 510).

In addition, Māori understand wellbeing as an intergenerational construct that draws on cultural values, beliefs, social norms and Indigenous knowledge. Māori wellbeing is whānau (family) wellbeing. This is because whānau are the foundational unit of Māori society. They are also the fundamental building block of a collective society, including hapū and iwi (Mihaere, 2015). A growing body of research is evidencing how a whānau-centred approach assists better wellbeing outcomes for Māori (Boulton and Gifford, 2014; Pihama et al., 2015; Kukutai et al., 2017). One of the participants in the interviews noted:

“I feel one of the challenges is the interpretation of sport. So a mainstream interpretation of sport is quite different from Māori sport. And so when people in mainstream are talking about Māori sport, they're thinking they're talking about the same thing that they're talking about.”

Strengthening whānau – social connection benefits

The major health benefit noted from the interviews is strengthening intergenerational relationships within whakapapa (genealogical – whānau, hapū, iwi) constructs. Having grandparents and their grandchildren in the same teams strengthened whānau relationships. Youth were more likely to engage in activity when they participated as a whānau. Activity is purposefully designed to be intergenerational, (for example touch teams are not aged based but whānau, hapū, iwi teams).

Being present at events supporting whānau, connecting with relations, connection to whakapapa and understanding place are all noted as benefits that support and strengthen whānau wellbeing. Māori see volunteering as ‘whānau participating’ in the event, rather than viewing volunteering as an expense or cost. Wardens, marshals, referees, cooking kai (food) in the kitchen is all part of participation, everyone has a role. Whānau are much more likely to engage as volunteers or organisers if their whānau from a range of ages are involved, from tamariki (children) to kaumātua (grandparents), as noted by one of the persons interviewed:

“Kapa haka is actually a whānau-based thing, so when you're doing kapa haka or we're training, we actually train as a whole family, so the whole family goes out.”

Revitalising language and culture – cultural benefits

A significant benefit of organised physical activity ‘as Māori’, is the use of te reo Māori. Whānau led sports events and initiatives are far more likely to incorporate te reo, tikanga and culture into their activities. For example, mihimihi, karakia, waiata, haka tautoko, pōwhiri, hui, wānanga and whakawhanaungatanga were common practices at events and sports programs. Referees at national Māori touch tournaments learn all calls in te reo, haka and waiata are part of the touch tournament. Traditional Māori forms of sport and recreation such as Ki-o-Rahi and Waka Ama are increasing. Kapa Haka (Māori performance) has now been recognised as a sport.

“They've got a vocab now for refereeing in te reo, and so they teach each other. So to be a referee, you don't have to whakapapa to Māori, unlike if you are playing, and so when they come, all of the referees learn the calls.”

Organised ‘as Māori’ physical activity is often hosted at a local Marae, contributing to Marae sustainability. Marae are important cultural spaces for Māori. Hosting local physical activity at the Marae through programmes such as MaraeFit brings whānau to the Marae. Capability is built within the Marae whānau as they manage and administer physical activities and events. Creating a sustainable Marae is essential for a Māori way of life and important for Māori wellbeing.

Being Māori – subjective wellbeing benefits

Participating in ‘as Māori’ organised physical activity has wellbeing benefits. These were described as an increased sense of belonging, increased confidence and reduction in low mood and depression. An additional outcome described is the sense of ‘Mana Motuhake’ which is difficult to translate but essentially means, to be self-determining and have control over one's own destiny.

“The broader outcomes of whanaungatanga and joy and just being Māori are just what we've contributed to our wellness. We've used our networks through sport to get to being well, to being better balanced, happier people ... Māori are happy when they're together and they're playing sport and they're proud and ... we are happy.”

Physical health benefits

Physical health benefits were identified as a positive outcome in the interviews. These benefits included increased fitness and strength, increased muscle mass, improved motor skills, decreases in body fat and increased mobility, particularly for kaumātua. Other health behaviours included improved nutrition and a reduction in harmful health behaviours including smoking and alcohol use.

"...If I catch you and I smell smoke on you, you'll be ousted out of the team." He said, "But the good thing is, if you don't want to give up smoking, go and help the cooks cook the kai, and help the people who now stand on the stage because you can't give up smoking." So it was actually ... everyone gave up smoking that day ... no patches, no chewing gum, no hypnotherapy. It's either you want to stand on the Matatini stage, or you want to smoke."

Mātauranga Māori – education benefits

Participating in organised physical activity resulted in increased knowledge of nutrition and healthy whānau behaviours. Organised physical activity 'as Māori' could also be built around māhinga kai (food gathering) practices. Outcome reporting data described whānau learning about water safety in rivers, lakes and oceans, as a result of participation in activities, and to combat New Zealand's preventable drowning statistics.

"The positive attributes to the Māori health index are amazing, and they're amazing because of the level of fitness, the level of commitment, the level of health knowledge now, and the level of passion that you actually have as a kaihaka."

Connection to the whenua/marae – environmental benefits

Māori view themselves as being inextricably linked to the natural features of the environment. Māori proverbs such as 'Ko au te awa. Ko te awa te awa, ko au' (I am the river. The river is me) illustrate the degree to which Māori health and wellbeing is tied to the wellbeing of the environment.

Being out in the environment, learning about the natural history and the history of connection between one's whānau and that place acknowledges the wairua (spiritual connection) between the person and the land, water and sky.

Interviewees spoke about the physical and mental health benefits of being in nature. Indeed, physical activity was commonly viewed as the vehicle to increased connection and learning about the natural environment. Participating in activities in the environment provided additional benefits and increased motivation. Being on or in the lake, ocean or river; walking the hills; spending time in the bush engaged Māori in activities with holistic outcomes.

"Connection back to your marae, feeling of belonging to something, being able to participate, whether you are just watching the activities taking the score, actually playing the game, cooking the Kai (food) you are there and you matter."

The need for greater equity in investment and outcomes

This was not included in the set of four questions, but in every interview the participants referred to the lack of funding for Māori sports. They were given very little by Sport NZ and it

was a bone of contention for the people in the interviews; for example, “*Why are they asking us – they don’t fund us very much at all?*”

Investment appears to be significantly less for ‘as Māori’ sporting events and organisations. Māori stakeholders described how Māori recreational activity received far less investment than Eurocentric forms of sport. For example, comparisons were made between investment in Waka Ama and rowing, between Māori Touch Rugby and New Zealand Touch Rugby, between Te Matatini and the National Symphony Orchestra, and between iwi or tribal sport organisations and regional sports trusts.

Despite the lack of funding, it was important for Māori stakeholders that activities were free or very low cost – recognising that many whānau are not in a position to pay.

“One of our values is access. That it has to be as accessible to as many and we will make it as easy as we can, which might be to the detriment of having whatever over here.”

5.7 Other stakeholder interviews

Four further stakeholders were interviewed, chosen for their knowledge and experience in the sector (see section 4.4 in the previous chapter). The persons interviewed were sent a copy of the questions in advance (see Appendix A3), with the following paragraph about confidentiality:

There is no pressure on you to participate in this study. If you do consent to the discussion, our report would say that your organisation participated in this part of the study, but we would not attribute anything that is said to your organisation. We have already reviewed other studies, including Sport New Zealand’s own outcomes framework. The purpose of this study is to check that we are not overlooking any benefits that are important to organisations like yourselves.

Each interview took between 20 and 30 minutes. The four questions were the same used for the interviews with Māori organisations.

Health benefits

The major benefit identified in the interviews was the health benefits of physical activity. This includes current health benefits (physical, mental, spiritual and cultural), and also contributes to prevention or delay of long-term illnesses. It helps people manage stress, which can have benefits for families. Physical activity can be a treatment for some illnesses and contribute to lower depression and anxiety. Efficacy of vaccinations can be higher in physically active people (Chastin et al., 2021). The science basis for linkages between physical activity and good health are well documented in the literature, and so the interviews did not explore this benefit in any detail.

Education benefits

The people interviewed advised that organised physical activity, including sport, is a key element in the education experience of young people. The values embedded in school sport, for example, reflect the values to be encouraged, modelled and explored in the New Zealand Curriculum, including excellence, innovation, diversity, equity, community participation, ecological sustainability and integrity. Engagement with organised physical activity helps develop key competencies such as thinking, managing self, relating to others, and participating and contribution.¹¹ For some students, participation in sport provides an outlet for energy that might otherwise lead to unsocial behaviour (such as bullying).

Productivity benefits

These benefits flow on from the health benefits in the previous section. Improved immune systems, better physical fitness, better managed stress, lower sick leave days all contribute to higher productivity in the workplace. Some of the benefits of a physically active workforce are reflected in higher tax revenue or lower government expenditure.

Social connections benefits

The interviews described specific examples of conscious efforts by providers to support participants in their programmes to feel part of a community. Resilient communities, for example, is one of four themes in the Christchurch City Council's community outcomes, and this is expressed in its recreation and sport programmes. The Council tailors programmes to different groups, for example, and aims to roster staff who become familiar faces to those groups. It provides women's only space at two pools. It is seeking to activate outdoor green spaces to encourage connected communities. Similarly, there is a socialisation element among participants in private sector gyms and other recreational facilities. The benefits of stronger social connections go beyond the participants. Parents and other relatives watching children's sport, for example, draws people together.

Cultural benefits

Participants in the interviews recognised that participation in organised recreational activity, if designed well, can result in cultural benefits. This feature is often taken for granted for the dominant population, but the interviews reported growing awareness in the sector that Māori participating as Māori, and other cultural groups participating in line with cultural values, have benefits beyond good health and social connections.

¹¹ Sport and recreation can be a subject of study in its own right or can provide case studies to motivate learning in other subject areas. This aspect is noted, but not part of the scope of this report.

Environmental benefits

One form of physical activity is outdoor recreation in green spaces. Participants in the interviews referred to evidence that human connection to nature has wellbeing impacts, and also leads to a demand to protect nature. Thus outdoor recreation can have a role to play in ensuring a healthy natural environment, particular in the context of threats posed by global climate change. This is particularly relevant for recreational places and spaces, which should be designed to avoid environmental damage and to support good environmental outcomes.

Subjective wellbeing benefits

The interviews revealed that some specific ways in which people feel about themselves can improve as a result of participation in physical recreation. This can come about from achieving personal goals such as fitness levels, body weight and standards of excellence. It can also result from self-exploration in challenging activities (for example, tramping in wilderness areas).

Negative or unintended changes

All of the persons interviewed could identify negative changes associated with physical activity. These were often accompanied with a statement about the importance of professional design of organised activities by people with knowledge on how to minimise or avoid these unintended changes. This question was asked without any prompting from negative items identified in the existing literature. Key examples of negative outcomes mentioned in the interviews include:

- Accidents and fatalities caused by participation, reflected in the costs of the government's Accident Compensation programme.
- Undue emphasis on winning, especially in a school setting, can have negative consequences for young athletes, by imposing more mental pressure that appropriate for their age and by shifting priorities away from classroom study.
- Participants having confrontational experiences with other participants, leading to lowered self-esteem or feeling marginalised from the community.
- Body dysmorphia in a physical activity setting can lead to lower subjective wellbeing.
- Minority communities experiencing perceived threats by members of the dominant community against deeply held cultural values.
- Toxic masculinity can be reinforced in some environments.
- Financial costs can exclude participation for some people.
- Outdoor recreation can cause harm to the natural environment.
- Transport to and from places of recreation results in greenhouse gas emissions; the carbon footprint needs to be addressed as part of the response to climate change.

Evidence for benefits

As part of the interviews, stakeholders were asked whether their organisation collects, or knows of, any evidence for the benefits (for example, surveys, datasets, reports, references to research, etc.)? The answer was generally no, with the following four exceptions.

Recreation Aotearoa – Te Whai Oranga publishes a series of INSIGHTS reports,¹² which offer case studies, links and key learnings relevant to the sector. INSIGHTS Report #3, for example, was published in December 2018 on the Treasury’s Living Standards Framework. It highlights examples where the sector contributes to the outcomes of health, leisure and recreation, cultural identity, environment and social connections.

The Christchurch City Council surveys users of its facilities, but these are not public documents. It uses Sport NZ and Exercise New Zealand reports.

Exercise New Zealand referred to a report prepared by Market Economics (2013) for the Auckland Council, Waikato Regional Council and Wellington Regional Strategy Committee. This estimated the total cost to the country of approximately half the population not having adequate physical activity, which was approximately \$1.3billion in 2010.

School Sport New Zealand undertakes an annual census on school representative sport, including student and teacher involvement.¹³ The organisation is currently exploring ways to update that resource.

Most important benefits

Another question asked in the interviews was, “what are the most important benefits for our study and why?” The participants thought that all the benefits were important, but there were several references to the importance of the physical recreation of young people (school age to around 25 years old). This is because skills and habits learned by a young person can produce benefits over a lifetime (implying a high net present value). There are concerns that New Zealand has a high level of physical inactivity globally (see Appendix 5 in Guthold et al., 2018), and that school leavers are perhaps not as likely to participate in organised physical activity as in previous generations.

¹² Available at <https://www.nzrecreation.org.nz/Site/outdoors/insights.aspx>.

¹³ Available at <https://www.nzsssc.org.nz/Education/School-Sport-NZ-Census-Reports>.

CHAPTER 6: STAGE 2 – MAPPING INPUTS, OUTPUTS AND OUTCOMES

6.1 Introduction

This chapter draws on the material in the previous chapters to create a map of outcomes from recreational physical activity. As explained in section 5.2, the ultimate aim of Social Value International is to “reduce inequality and environmental degradation and improve wellbeing” (Social Value International, 2021a, p. 6), where the definition of wellbeing comes from the New Economics Foundation:¹⁴ “Well-being is most usefully thought of as the dynamic process that gives people a sense of how their lives are going, through the interaction between their circumstances, activities and psychological resources or ‘mental capital’.”

This high-level definition of wellbeing reflects that different communities can have different values for judging “how their lives are going”. This is evident in the summary of Māori stakeholder interviews (section 5.6), which included the following comment:

Māori understand wellbeing as an intergenerational construct that draws on cultural values, beliefs, social norms and Indigenous knowledge. Māori wellbeing is whānau (family) wellbeing. This is because whānau are the foundational unit of Māori society.

The outcomes map presented here brings together different perspectives of Māori and other stakeholders. It captures the outcomes identified from discussions with stakeholders, the literature, and various policy documents, summarising how recreational physical activities (e.g., sports participation and volunteering) have an impact on their beneficiaries.

6.2 Quantity, quality and equity

Eating and Activity Guidelines published by the Ministry of Health (2020, p. 11) recommend that adults should do at least 2.5 hours of moderate or 1.25 hours of vigorous physical activity spread throughout the week. This is an example of a quantitative measure of physical activity (listed as an output in an SROI analysis). Aotearoa New Zealand has good estimates of the percentage of the population that meets a quantitative standard of this nature, particularly through the New Zealand Health Survey and the Active NZ Survey.

The stakeholder interviews stated that an important determinant of recreational physical activity on wellbeing is the quality of that activity (see also Sport New Zealand, 2017, p. 11). Quality means different things in different contexts, but typically includes factors such as:

- Immersion in the cultural values of the participants;
- Care for the health and safety of participants;
- Attention to inclusivity issues; and
- Incorporation of best practices for maximising benefits.

¹⁴ See <http://www.nationalaccountsofwellbeing.org/learn/what-is-well-being.html>.

Section 5.6, for example, highlighted the importance for Māori of Māori participating in recreational physical activities as Māori (see also sections 5.4 and 5.5). The stakeholder interviews reported that providers typically seek feedback from participants on the quality of their experience, but there is no public data offering measures of quality. This is a significant gap, since public investment in recreational physical activity is an important resource for employing expertise to deliver quality experiences.

Indeed, the interviews with the five Māori stakeholders drew attention to inequities in the public resources available for organised activities involving Māori participants. This inequity reduces subjective wellbeing directly, as well as through the lower engagement by Māori in recreational physical activity as a consequence. Sport NZ is committed to Te Tiriti o Waitangi as Aotearoa New Zealand's founding document, and this observation in the interviews provides a further reason for recognising the honour of Te Tiriti o Waitangi as an outcome in its own right in Sport New Zealand's Te Pākē o Ihi Aotearoa (see section 5.4).

Sport NZ has included attention to quantity, quality and equity in its Outcomes Framework (Sport NZ, 2019, Figure 5, p. 11; see Table 5.2 in section 5.3), using the headings of physical activity, experience and cultural vitality, and system. Data limitations mean the analysis in this report focuses on the quantity of physical activity, but the report's authors emphasise the importance of quality and equity for enhancing wellbeing.

6.3 The outcomes map

The research team synthesised the stakeholder engagements described in previous chapters to produce maps of the inputs, outputs and outcomes arising from the activity of engaging in recreational physical activity (see section 2.4 for an explanation). Figure 6.1 and Figure 6.2 identify the **inputs** (provided by stakeholders) used to resource and deliver activities (**outputs**) which result in **outcomes** for stakeholders. The outcomes map, presented in Figure 6.3 is an inclusive summary of the outcomes identified from our data collection, grouped according to the LSF. It includes outcomes that have both positive and negative (highlighted in blue) impacts on wellbeing. Some of the unintended outcomes with negative impacts on wellbeing result from poorly designed recreational physical activities, but important examples that appear to be a necessary part of such activities include:

- Accidents and fatalities caused by participation.
- Damage to subjective wellbeing as a consequence of negative experiences in recreational physical activity.
- Marginalisation from social connections due to financial constraints or a failure for recreational physical activity programmes to allow for diversity.
- Undue emphasis on winning and subsequent mental pressure.

Harm to the natural environment generated from activities and transport which result in for example, greenhouse gas emissions.

Figure 6.1: Input Map

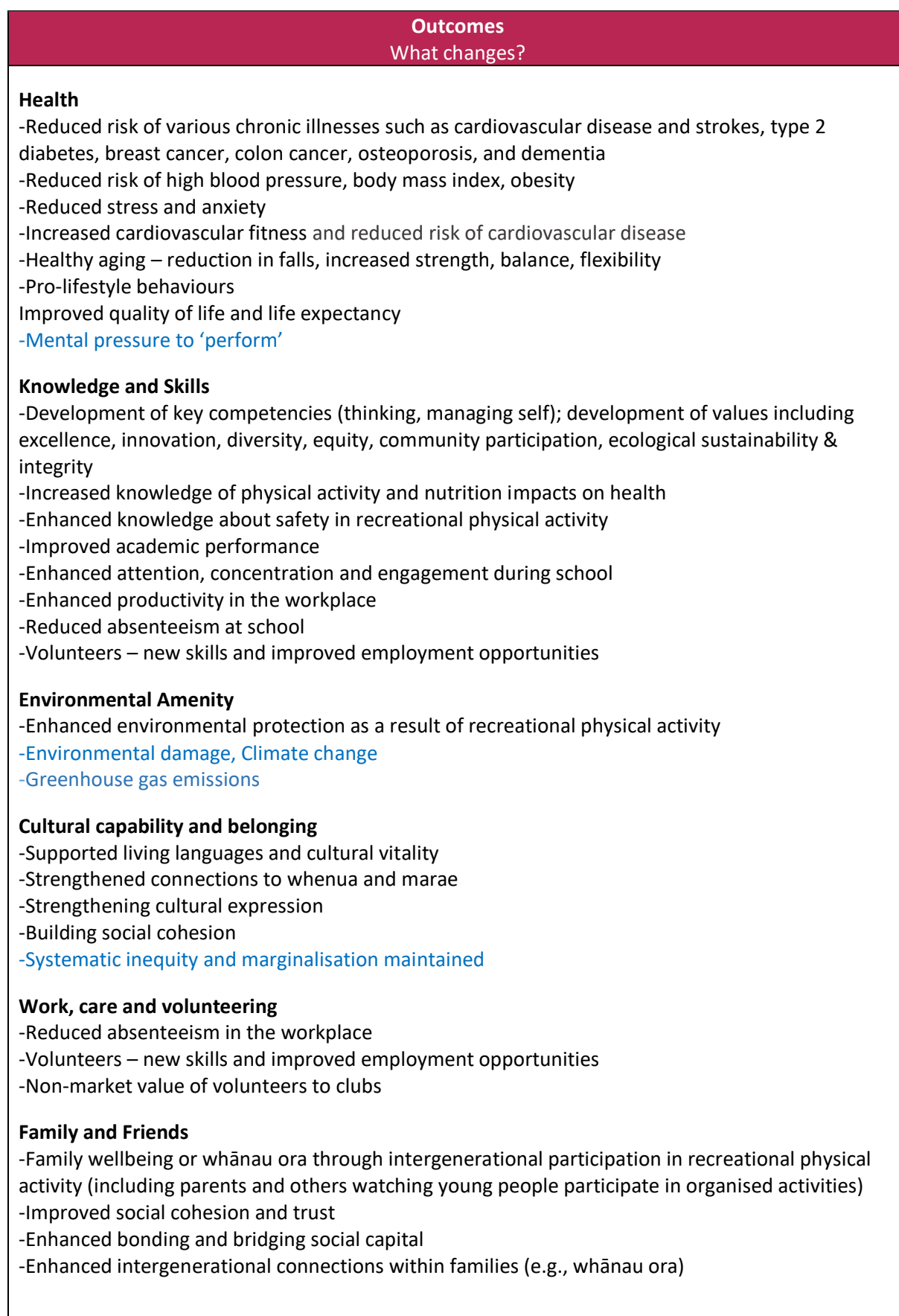
Inputs What do they invest?			
		Market Transactions	Non-Market Transactions
Consumption goods and services required for recreational physical activity		Household purchases of Clothing, footwear, etc. Organisation purchases of clothing, footwear, etc.	
Capital Services	Physical capital	Depreciation	
	Human capability	Paid coaches, administrators, technical staff, etc.	Time value of Volunteers
	Natural environment	Paid ecological services; e.g. from parks and sport fields	Unpaid ecological services; e.g. from a benign climate
	Social cohesion		Generally accepted social norms and trust
	Culture		Authentic cultural values and practices

Note: The total of items in the green box is measured by financial expenditure of public and private sector bodies related to recreational physical activity. Household purchases comes from the Household Economic Survey.

Figure 6.2: Output Map

Outputs Summary of quantifiable activities
<p>Participation associated with recreational physical activity (Time use)</p> <ul style="list-style-type: none"> - Frequency and intensity of participation - Adults meeting the Ministry of Health (MoH) guidelines - Children and teenagers meeting the MOH guidelines - Other (fairly active) participants in recreational physical activity - Participation as an expression of cultural value (e.g., participation as Māori, Pākehā)
<p>Volunteering associated with recreational physical activity (Time use)</p> <ul style="list-style-type: none"> - Frequency of volunteering (e.g., per year, month, week) - Hours volunteered
<p>Learning about safety in outdoor and indoor recreational physical activities</p>

Figure 6.3: Outcomes Map



Outcomes
What changes?

Engagement and voice

- National identity
- Trust in the procedural fairness of recreational physical activity public policy
- The honour of the Crown as a partner in Te Tiriti o Waitangi is enhanced

Safety

- Improved safety in outdoor and indoor recreational physical activities
- Increased pro-social behaviour and reduced anti-social behaviour
- Reduced crime
- Accidents / injuries / early deaths
- Prejudice and threatening behaviour towards deeply held cultural values harming cultural safety

Income, consumption and wealth

- Reduced income losses due to absenteeism as a result of inadequate physical activity

Subjective wellbeing¹⁵

- Improved happiness, purpose and life satisfaction from participation in recreational physical activity, leisure and play
- Subjective wellbeing value associated with subjective experience of good health
- Subjective wellbeing value associated with being connected to nature
- Subjective wellbeing value associated with authentic cultural expression in physical activity
- Subjective wellbeing value associated with volunteering in the physical activity sector
- Subjective wellbeing value associated with a sense of belonging to/ being part of, a community
- Improved holistic wellbeing and wellness – ora, to be well
- Confrontation experiences – lowered self esteem
- Body dysmorphia
- Reinforcement of toxic masculinity

6.4 Valuing what matters and testing materiality

The previous section presented a comprehensive list of outcomes from recreational physical activity. The next step in the analysis was to use Principles 3 and 4 of the SROI method to focus on the outcomes that are most material for the analysis. Principles 3 and 4 are described as follows (Social Value International, 2019b, p. 5, and 2018, p. 2):

Principle 3 - Value the things that matter:

Valuing the things that matter requires an explicit recognition of the relative value or worth of different changes or 'outcomes' that people experience (or are likely to experience) as a result of activities. Value is subjective in its very nature. Therefore, it is critical that Principle #3 is applied in conjunction with Principle #1 'Involve stakeholders' so that we value outcomes from their perspective.

Principle 3 also relates to valuing the inputs required to deliver the activities that are being accounted for.

¹⁵ For the purposes of the SROI, the subjective wellbeing outcome in the separate domains are collectively summarised under the Subjective Wellbeing domain.

Principle 4 - Only include what is material:

Determine what information and evidence must be included in the accounts to give a true and fair picture, such that stakeholders can draw reasonable conclusions about impact.

One of the most important decisions to make is which outcomes to include and exclude from an account. This decision should recognise that there will be many outcomes, and a reporting organisation cannot manage and account for all of them. The basic judgement to make is whether a stakeholder would make a different decision about the activity if a particular piece of information were excluded.

Principle 3 requires the analysis to recognise outcomes not traded in the market, as well as outcomes with a clear market value. That principle is incorporated into the Inputs table, which is divided into separate columns for market transactions and non-market transactions. The table of outcomes also contains market and non-market items. The former are readily estimated using market values. Valuation of non-market items is a vibrant research topic in its own right, and this study was able to draw on some pioneering analysis by Simetrica Jacobs (a and b) previously performed for Sport NZ. There remain some important gaps in this literature, which this report highlights in the following chapter.

As a first step towards evaluating materiality, the research team sought to identify robust estimates of outcomes, on the basis that the most highly valued outcomes are most likely to have been the subject of previous measurement studies. Two reports were strongly influential in this evaluation.

First, Waka Kotahi, New Zealand Transport Agency published in 2020 a technical paper as part of a process of updating its Monetised Benefits and Costs Manual. The paper included a comprehensive review of available evidence on the health benefits of moving a person from physically inactive to physically active. This review produced estimates that are used in large-scale public investment decisions, and which have been accepted by the New Zealand Treasury for its cost benefit analysis. Consequently, these are strongly credible estimates, which our own study has used in its measures of health benefits from recreational physical activity.

Second, Simetrica Jacobs (a and b) have provided Sport NZ with estimates of the economic value of the subjective wellbeing enjoyed by participation in three different levels of moderate and vigorous physical activity (30-150 minutes per week, 150-300 minutes per week, and more than 300 minutes per week). That work also provided an estimate of the economic benefit to young people (5-17 years) meeting physical activity guidelines. The research team again judged these estimates to be highly credible, so that subjective wellbeing became a second material element in the analysis of beneficial outcomes.

The analysis of inputs revealed the critical contribution made by volunteers in the sector. On the inputs side, the cost of that time is estimated using an estimate of average wages in Aotearoa New Zealand. That cost is exactly matched by the benefit to the voluntary sector (in particular clubs) of not having to pay for those services. The analysis shows that this amount is highly material, lying between the economic value of health benefits and the economic value of subjective wellbeing.

The literature review and stakeholder interviews revealed that the recreational physical activity sector in Aotearoa New Zealand places significant weight on the impact on social cohesion. The analysis by Simetrica Jacobs (a and b) for Sport NZ included an estimate of the economic value of sports club members (\$831 per person per year in 2019 dollars), which the report recognised was likely to reflect the wellbeing benefits of social connections. The research team also identified an unpublished Australian report that had provided an estimate of the economic value of this impact in an Australian context (Gratton et al., 2018). The researchers adjusted that estimate for the Aotearoa New Zealand context, which produced an estimate of \$608 per person per year. To be conservative, this latter figure became the mid-point estimate for an item labelled social capital in the analysis of beneficial outcomes.

The research team identified two further items with estimated values of a similar order of magnitude to that estimate of social capital, one positive and one negative. The Waka Kotahi, New Zealand Transport Agency (2020) included an estimate of higher economic output due to reduced absenteeism, with a recommendation that this estimate be discounted by 50% to recognise that producers can find alternatives if a staff member is absent due to physical inactivity related illness. That recommendation was included in the SROI model (base case analysis), and not adopted in the high value analysis conducted for the sensitivity analysis. The negative value concerns the ongoing financial cost of supporting people who are injured in sport activities each year. The analysis uses the reported value of active claims administered by the New Zealand Accident Compensation Corporation.

Two material items revealed in the literature review and stakeholder analysis that the research team has not attempted to value are labelled 'Intergenerational family connections' and 'Cultural connections'. They were most strongly emphasised in publications on Māori sport and recreation, and in the interviews with Māori stakeholders, but this does not mean that are unimportant across all cultural groups in Aotearoa New Zealand. The research team was unable to identify any economic estimates of these benefits, and indeed the team is conscious of a wider debate about whether this would be appropriate (see, for example, Awatere, 2021). Rather than seeking to monetise these benefits, we have devoted chapter 9 to their discussion.

Table 6.1 summarises the selected outcomes included in the study, grouped by the stakeholders experiencing change. The nine outcomes included in the monetary valuation are discussed in chapter 7. The outcomes that are not included in the monetary valuation are discussed in chapter 9.

Table 6.1: Outcomes Included in the study

Stakeholder and activity	Outcome resulting from the activity	Financial proxy	Source	Included in monetary valuation?
Adult participants (18+) 150 mins+ of moderate + vigorous physical activity per week	1. Better life quality, expectancy	DALY approach/Mortality and Morbidity approach	The Waka Kotahi, New Zealand Transport Agency (2020) p. 39	Y
Adult participants (18+) 150 mins+ of moderate + vigorous physical activity per week	2. Prevention of diseases attributable to physical inactivity	Health system costs due to physical inactivity	The Waka Kotahi, New Zealand Transport Agency (2020) p. 41	Y
Adult participants (18+) for 30-149 mins per week Adult participants (18+) 150-300 mins+ of moderate + vigorous physical activity per week Adult participants (18+) 300 mins+ of moderate + vigorous physical activity per week	3. Improved subjective wellbeing (life satisfaction)	Wellbeing valuation of life satisfaction from adult participation (30-150 mins; 150-300mins; 300+ mins)	Simetrica Jacobs (a)	Y
Young people (5-17): Meeting the physical activity NZ guidelines	4. Improved subjective wellbeing (happiness)	Wellbeing valuation of happiness from YP participation (meeting physical activity guidelines)	Simetrica Jacobs (a)	Y
Adults (18+): Regular volunteers	5. Improved subjective wellbeing (life satisfaction)	Wellbeing valuation of life satisfaction from adult volunteering (last 7 days)	Simetrica Jacobs (a)	Y

Stakeholder and activity	Outcome resulting from the activity	Financial proxy	Source	Included in monetary valuation?
Adult participants (18+) 150 mins+ of moderate + vigorous physical activity per week	6. Reduced absenteeism	Reduction in lost output due to physical inactivity	The Waka Kotahi, New Zealand Transport Agency (2020) p. 41	Y
Adult participants (18+) 150 mins+ of moderate + vigorous physical activity per week	7. Improved social capital	Wellbeing valuation of participation, including social capital	Gratton et al. (2018)	Y
All adult participants (18+)	8. Increased sports and recreation injuries and accidents	Negative value of active claims for sport-related injuries during the year	ACC Active Claims Sport, ACC (2022)	Y
Voluntary clubs	9. Replacement value of volunteers	Opportunity cost of volunteer time	Sport England (2020)	Y
Māori participants	10. Intergenerational family connections	N/A	See chapter 9	N
Māori participants	11. Cultural connections	N/A	See chapter 9	N

CHAPTER 7: STAGE 3 -MEASURING INPUTS, OUTPUTS AND OUTCOMES

Principle 6 of the SROI methodology requires the analysis to 'be transparent'. It is about being accurate and honest in decision making throughout the research process (Social Value International, 2021b, p. 5):

This principle requires that each decision is explained and documented in relation to: stakeholders, outcomes, indicators and benchmarks; the sources and methods of information collection; the different scenarios considered; and the communication of the results to stakeholders. This will include an account of how those responsible for the activity will change the activity as a result of the analysis. The analysis will be more credible when the reasons for the decisions are transparent.

This section of the report outlines the measurement of inputs and outputs, and the valuation of the outcomes monetised in the study.

7.1 Inputs

Inputs are those things that stakeholders contribute to make recreational physical activity possible in Aotearoa New Zealand. Chapter 6 listed the material inputs identified in this study. Our approach to measuring the inputs is to focus on: (i) the financing of those inputs in the case of market transactions; and (ii) the opportunity cost of non-market transactions, particularly of volunteered time. This reduces the complexity of the analysis to two types of inputs – financial (money) and non-financial (time).

Table 7.1 summarises the inputs for Aotearoa New Zealand. The first column lists the stakeholders providing financial and non-financial inputs. **Note that this means not all those stakeholders listed in the inputs map (Table 6.1) are included in Table 7.1 because their inputs are sold to the listed stakeholders.** For example, voluntary clubs are not included because they do not provide any inputs other than those already accounted for (e.g., household spending; volunteer time). Some stakeholders appear disproportionately small, for example the commercial sector. This is because the majority of inputs provided by this sector are counted for in household spending. The focus on spending (for market transactions) meant that care could be **taken to ensure no double counting between organisations** (e.g., payments made by the Lotteries Grants Board to Sport NZ, which Sport NZ then spent on community physical recreation activities).

The total sum of the financial and non-financial inputs was \$7.95bn. Approximately 75% of all inputs were from two categories: household expenditure (\$2.95bn - 37%) and volunteer time (\$3.09bn - 38%).

Table 7.1: Summary of Inputs

Stakeholder	Inputs	Value (\$m)
Financial inputs		
Households	Activity charges/fees	\$853.7
	Equipment costs (incl. bicycles)	\$1,132.8
	Sport clothing and footwear	\$137.7
	Private Transport	\$451.0
	Public Transport	\$379.0
	Sub-total	\$2,954.2
Central Government	Sport NZ Ihi Aotearoa (Excl. High Performance Sport)	\$69.6
	Excl. Lotteries Grants Board (counted below)	-\$54.9
	Add PM Scholarships	\$4.5
	DoC Management of Recreational Opportunities	\$168.7
	Waka Kotahi walking and cycling improvements	\$57.3
	MoE: Kiwisport Funding	\$14.0
	MoE: Primary Education	\$137.1
	MoE: Secondary Education	\$96.4
	MoE: Property Management	\$82.0
	Other Central Government	\$48.7
	Sub-total	\$623.4
Local Government	Sport and Recreation Operating Expenditure	\$1,004.5
	Sub-total	\$1,004.5
Private Sector	Private Schools: Primary	\$3.5
	Private Schools: Secondary	\$5.8
	Private Schools: Property	\$3.0
	Universities Sport and Recreation	\$6.0
	Other Tertiary Institutions Sport and Recreation	\$3.6
	Class 4 Grants, Lotteries, TAB	\$246.0
	Philanthropy	\$12.0
	Sub-total	\$279.9
Non-financial inputs		
Volunteer clubs	Volunteer time	\$3,086.3
	Sub-total	\$3,086.3
TOTAL		\$7,948.3

The analysis of financial inputs from households was straightforward, based primarily on data from the Household Economic Survey. Activity charges/fees cover items such as sports tuition, subscriptions to sports clubs and fitness clubs, and charges to participants for recreational and sporting services. Equipment costs cover purchases of new major durables for outdoor or indoor recreation, new equipment for sport, camping and outdoor recreation, new bicycles, the maintenance of major durables and bicycles and the hire of recreational and sporting goods. Sports clothing and footwear cover sportswear and sports footwear,

discounted by 60 percent to recognise that this clothing includes fashion items not intended for recreational physical activity.

Estimates for private and public transport also drew on the New Zealand Household Travel Survey, overseen by Te Manatū Waka – The Ministry of Transport. This allowed the analysis to estimate the percent of journeys undertaken for recreation purposes by private car or van (7.4%) or by public bus or train (6.5%). Household Economic Survey data were then used to estimate expenditure on private transport (vehicle fuels, vehicle servicing and repairs, bicycle repairs, other costs) and public transport (passenger transport services). Table 7.1 reports the respective shares of journeys for recreation purposes.

This analysis of financial inputs from central government, local government and the private sector was greatly assisted by a previous study commissioned by Sport NZ from Allen and Clarke (2021) on funding sources for the play, active recreation and sport system in Aotearoa New Zealand. The research team were able to use that study to check its own literature review and consultation with stakeholders had not overlooked any material input. It was also able to go back to the original sources to obtain relevant data for the reference year of 2019.

One material item that the Allen and Clarke report noted it had been unable to measure was the value of investment in physical education in primary schools and secondary schools. The research team agreed that some estimate needed to be made of this item. We noted that the New Zealand Curriculum has 8 Learning Areas, including Health and Physical Education as one of those Learning Areas. Physical education is one of three subjects in this Learning Area. Hence, a defensible assumption is that one-third of one-eighth of total spending on primary and secondary education might be attributed to physical education (in the absence of any better estimates of relative importance).

This analysis was carried out separately for primary and secondary schools. Total spending in the public education sector (including integrated schools) was taken from the government's annual budget documents. An estimate was made for the private education sectors in proportion to student full-time enrolments taken from the Education Counts website.

The non-financial input of volunteer time was estimated by multiplying average volunteer hours worked per week (taken from the Active NZ survey) by average hourly earnings (taken from the Quarterly Employment Survey), and then annualised to 52 weeks.

Some financial inputs are not included in the table; for example, non-sport charities donating to local sports clubs. The research team is confident these are likely to be small relative to the size of other inputs, however, and no data sources were available to capture these.

7.2 Outputs

To carry out an SROI, it is also necessary to clarify and measure outputs. Outputs are a quantitative summary of an activity. There are two types of outputs for Aotearoa New Zealand: (1) participation in recreational physical activity and (2) associated volunteering. Data for these outputs are well documented in the Active NZ survey. Highlights relevant to this report include the following summary statistics.

Participation:

1. Percentage of adults (18+) doing at least 150 minutes of moderate to vigorous physical activity in the last week: **48.2%**.
2. This was divided between adults doing 150 to 299 minutes (**18.8%**) and 300 minutes or more (**29.4%**) of moderate to vigorous physical activity in the last week.
3. Percentage of adults (18+) doing between 30 and 149 minutes of moderate to vigorous physical activity in the last week: **17.3%**.
4. Percentage of children and young people (5-17 years) meeting the physical activity guidelines of at least one hour a day of moderate to vigorous activity done on all seven days in the last week: **7.2%**.

Volunteering:

1. Percentage of adults (18+) volunteering for a sport, exercise or recreational activity in the last seven days: **10.5%**.

7.3 Outcomes

SROI is an outcomes-based measurement framework. Measurement of outcomes is the only way to be sure that changes for stakeholders are taking place. As explained in chapter 6, the research team included eleven outcomes in the study, but two were not included in the monetary valuation (see Table 6.1). Thus, we measured and valued nine outcomes in total, across six domains, for the national population. As shown in Table 7.2, we included: two health outcomes; three subjective wellbeing outcomes; reduced absenteeism; the replacement value of volunteering, enhanced social capital, and accident / injuries related to sport and recreation participation. The following subsections explain the outcomes valuation in more detail.

Table 7.2: Domains and Outcomes

Domain	Outcomes
Health	Better quality of life and increased life expectancy
	Prevention of diseases attributable to physical inactivity
Subjective wellbeing	Increased wellbeing (life satisfaction) - adult participants
	Increased wellbeing (happiness) - young people (5-17 years)
	Increased wellbeing (life satisfaction) - adult volunteers
Income, consumption and wealth	Higher output from reduced absenteeism
Work, care and volunteering	Replacement value of volunteering
Family and friends	Enhanced social capital created by participation
Safety	Increase in the number of accidents and injuries related to sport and recreation

Health

As explained in chapter 6, Waka Kotahi, New Zealand Transport Agency (2020) produced strongly credible estimates of the health benefits of moving a person from physically inactive to physically active (that is, meeting public health guidelines for physical activity). This review used two different methods to calculate the total estimated economic benefit of increasing healthy life quality and expectancy (idem, pp. 39-40). The Disability-Adjusted Life Year (DALY) method produced an estimate of \$1,771 per person (measured at 2018 prices). The mortality and morbidity approach produced an estimate of \$7,075 per person (2018 prices). The report recommended using an average of these two values, which is the approach taken in this study. The average value of \$4,424 in 2018 prices is \$4,498 per person using 2019 prices, as shown in the first row of Table 7.3.

Table 7.3: Health Valuation Summary

Stakeholder	Outcome			Impact (\$m)
		Description	Quantity	
Participants (Adults 18+)	Better quality of life and increased life expectancy	1,853,333	\$4,498	8,336.5
Participants (Adults 18+)	Prevention of diseases attributable to physical inactivity	1,853,333	\$367	680.3
				9,016.7

Quantity – number of people experiencing the outcome (participants).

Value – How important is the outcome on average to each affected stakeholder (expressed in monetary terms)

Impact – quantity x value

The same study also provided an estimate of annual health system costs due to eight diseases attributable to physical inactivity (idem, p. 41). The eight diseases are breast cancer,

colorectal cancer, hypertension, coronary and ischemic heart disease (CHD/IHD), stroke, osteoporosis, diabetes TII, and depression. The estimated value was \$361 for each inactive person in 2018 prices, which at 2019 prices is \$367.

Subjective wellbeing Table 7.4 presents estimates of subjective wellbeing for different levels of participation, and for regular volunteering, in recreational physical activity. These estimates are taken from a study by Simebrica Jacobs (a) for SportNZ, with one adjustment to avoid double-counting.

Table 7.4: Subjective Wellbeing Valuation Summary

Stakeholder	Outcome	Impact (\$m)		
		Description	Quantity	Value (\$)
Participants (Adults 18+)	Increased wellbeing (life satisfaction) for adults undertaking 30-149 minutes per week of moderate to vigorous physical activity	665,494	\$583	387.7
	Increased wellbeing (life satisfaction) for adults undertaking 150<300 minutes per week of moderate to vigorous physical activity	722,431	\$1,115	805.4
	Increased wellbeing (life satisfaction) for adults undertaking 300+ minutes per week of moderate to vigorous physical activity	1,130,902	\$1,757	1,986.9
Participants (5-17 years)	Increased wellbeing (happiness) children and young people undertaking at least one hour a day of moderate to vigorous physical activity 7 days a week	60,056	\$936	56.2
Volunteers (18+)	Increased wellbeing (life satisfaction) for adults undertaking regular (weekly) volunteering to support sport and active recreation (excluding those who also meet the 30+ minutes per week physical activity threshold)	138,072	\$571	78.9
				3,315.2

Quantity – number of people experiencing the outcome (participants/volunteers).

Value – How important is the outcome on average to each affected stakeholder (expressed in monetary terms)

Impact – quantity x value

The literature identifies that improved health is a significant contribution to subjective wellbeing (see, for example, Foster 2020).¹⁶ Since health impacts are already estimated under the previous heading, an allowance must be made for this in the subjective wellbeing measure in order to avoid double-counting. Foster (2020), for example, cites Richardson et al. (2015)

¹⁶ The research team is grateful to Hamish McEwen for providing this reference.

to comment that one measure of health impacts (the EQ-5D scale) explains about 25% of the variance on subjective wellbeing scales. The research team took this value as a reasoned starting point, and so discounted the subjective wellbeing measures in Simetrica Jabobs (a) by 25% for the base case analysis.

Income, consumption and wealth

Waka Kotahi, New Zealand Transport Agency (2020, p. 41) included an estimate of lost economic output due to absenteeism associated with physical inactivity. This was \$943 per annum per inactive person. The study also recognised there are arguments against including this impact, on the basis that employers can mitigate these impacts, and so recommends that the lost output value be halved for assessments (idem, p. 43). Our own study has followed this recommendation for the base case analysis, as shown in Table 7.5 (where the value has been updated from 2018 to 2109 prices).

Table 7.5: Income, Consumption and Wealth Valuation Summary

Stakeholder	Outcome		Impact (\$m)	
	Description	Quantity	Value (\$)	
Participants (Adults 18+)	Higher output from reduced absenteeism	1,853,333	\$479	888.5
				888.5

Quantity – number of people experiencing the outcome (participants/volunteers).

Value – How important is the outcome on average to each affected stakeholder (expressed in monetary terms)

Impact – quantity x value

Work, care and volunteering

In economic terms, volunteer time is a non-financial input into the activities of sport. However, volunteers also have a non-market value or a replacement value for the organisations that utilise them. It is distinct from the individual subjective wellbeing of volunteers. This value is that calculated for the same item on the inputs side of the analysis (see section 7.1 above).

Table 7.6: Work, Care and Volunteering Valuation Summary

Stakeholder	Outcome		Impact (\$m)	
	Description	Quantity	Value (\$)	
Voluntary sports clubs	Replacement value of volunteering	401,479	\$7,687	3,086.3
				3,086.3

Quantity – number of people experiencing the outcome (participants/volunteers).

Value – How important is the outcome on average to each affected stakeholder (expressed in monetary terms)

Impact – quantity x value

Family and friends

The study by Simetrica Jacobs (a) for SportNZ included an estimate for the subjective wellbeing benefits of sports club membership, which was \$831 per person per year. As explained in chapter 6, the research team checked this using a credible unpublished report produced by the Australian Sports Commission (Gratton et al., 2018), which utilised the Wellbeing Valuation Approach to estimate the hypothetical income required to compensate a person for not benefiting from the social capital enhancement generated through participation in sport and physical activity in club activities. The ratio of that estimate to the Australian study's estimate of subjective wellbeing benefits was applied to the subjective wellbeing benefits estimated for New Zealand by Simetrica Jacobs (a). This produced a slightly more conservative estimate of \$608 per person per year, which is the value reported in Table 7.7.

Table 7.7: Family and Friends Valuation Summary

Stakeholder	Outcome Description	Quantity	Value (\$)	Impact (\$m)
Participants (Adults 18+)	Enhanced social capital created by participation in recreational physical activity	1,853,333	\$608	1,126.4
				1,126.4

Quantity – number of people experiencing the outcome (participants/volunteers).

Value – How important is the outcome on average to each affected stakeholder (expressed in monetary terms)

Impact – quantity x value

Safety

In Aotearoa New Zealand injuries by accident are covered by a compulsory social insurance scheme administered by the Accident Compensation Corporation (ACC). The associated costs can continue for several years, and so the approach taken in this analysis is to take the total cost of active claims associated with sport and recreation injuries as a negative impact of recreational physical activity. This figure is provided by ACC (2022) and reported in Table 7.8.

Table 7.8: Safety Valuation Summary

Stakeholder	Outcome Description	Quantity	Value (\$)	Impact (\$m)
Participants	Increase in the number of accidents and injuries related to sport and recreation	537,080	-\$1,155	-620.1
				-620.1

Quantity – number of people experiencing the outcome (participants/volunteers).

Value – How important is the outcome on average to each affected stakeholder (expressed in monetary terms)

Impact – quantity x value

Omissions

This study attempts to understand and measure the change experienced by stakeholders as a result of taking part in recreational physical activity in Aotearoa New Zealand. However, it is impossible to capture all changes that beneficiaries may experience through participation and volunteering.

In common with other SROI studies of sport and physical activity, a number of outcomes identified in the literature and by stakeholders have been acknowledged, but were not able to be included in the monetary valuation for various reasons. These included a lack of robust evidence linking recreational physical activity with social outcomes and a lack of empirical data on the outcomes identified. This includes some unintended, negative outcomes.

The outcomes monetised in this study tend to focus on those derived from general sports participation by the population, rather than outcomes derived from participation by specific groups in response to targeted intervention (such as secondary health programmes for people with diseases, and diversion programmes for at-risk youth, which are targeted at particular groups). This represents another omission requiring its own study.

The measurement and valuation of outcomes pertaining to children and young people from taking part in recreational physical activity, remains a significant omission. The Aotearoa New Zealand SROI study has for the first time included a value for young people and subjective wellbeing, nevertheless, it is still likely to underestimate the true value of sport and active recreation to this demographic. There is promising evidence to suggest that young people benefit socially and academically from engagement in sport, but these outcomes, as in other SROI studies, are omitted from current estimates, due to a lack of robust evidence and data.

As a result of the limitations identified above, it is likely that the monetised value of recreational physical activity in Aotearoa New Zealand presented in this study represents a conservative value for the sector.

CHAPTER 8: STAGE 4 & 5 – ESTABLISHING IMPACT AND CALCULATING SROI

8.1 Establishing impact

Stage 4 of an SROI analysis establishes impact. Principle 5 – Do not Over-claim – is relevant to these calculations; see Social Value International (2021c). This requires the analyst to take care to claim only the value that activities are responsible for creating. Thus, an SROI analysis adjusts the valuation of outcomes for deadweight, drop off, attribution and displacement. This has been addressed in the present study, taking into account that it is a population-level analysis.

We begin by noting that our approach to identifying and measuring annual investment in recreational physical activity is comprehensive. The counterfactual scenario, therefore, is one in which there is:

- No physical education provided in primary or secondary schools.
- No coaching, officiating or volunteered services.
- No purchases of footwear clothing for sport.
- No production of equipment for sport and recreation.
- No sport and recreation facilities provided by the private or public sector.
- No compensation for sport and recreation injuries.

In such a scenario, it is reasonable to think that there would be some recreational physical activity, but the number of people meeting the physical activity guidelines would be very low. This is a typical observation for a population level SROI, which is why the values of outcomes are considered a reliable guide to impact of the total investment in inputs (Davies et al., 2019).

In a typical SROI analysis of a programme, the researcher identifies a cohort of participants in the programme, and tracks their outcomes over time. In such an analysis, the research must make explicit assumptions about drop off and discounting. In a population level analysis, however, the researcher does not need to track a cohort, but can take a *snapshot* of the population at a given point in time (2019 for this study). This addresses the listed issues automatically.

In particular, the *snapshot* of social value in a given year is a reasonable conflation of the dynamic process of continued investment and participation in recreational physical activity, resulting in longer term benefit generation. Thus, the benefits valued in the present day result from investment in previous years, and investment in the present day results in time lagged benefits in future years. These are balanced out in the national population. It includes young people receiving education that will produce future benefits, and old people about to retire after a lifetime of investment. We acknowledge the limitations of a snapshot approach, which may need refining if population-level sport SROI models are to become more dynamic in the future.

Deadweight is implicit in the non-participant default case and in the case of attribution, because many of the empirical studies on which the estimates of outcomes are based are of a multivariate nature, they already incorporate consideration of other likely contributing factors to these outcomes. Hence, no further adjustments to the social valuation, aside from those discussed in section 7.3, were necessary for the population-level analysis.

Regarding displacement (how much of the outcome has displaced other outcomes), because the estimation presented in this report covers the whole of recreational physical activity, arguably how one activity may displace another is not relevant. While time spent on recreational physical activity may displace time away from other beneficial activities, there is little evidence of this (Davies et al., 2019). Indeed, some evidence suggests that the opposite is true and that sport and other leisure activities are typically complements rather than substitutes (Shibli et al., 2014).

8.2 Calculating the SROI

The final stage of an SROI analysis is to calculate the SROI value or ratio. Table 8.1 summarises the main constituent parts of the Social Return on Investment calculation.

Total inputs are estimated to be \$7.95bn. This is reproduced from Table 7.1 in the previous chapter. A feature of the recreational physical activity sector is its large reliance on voluntary labour. This accounts for 38.8% of total investment in Table 8.1.

The total value of all social outcomes is estimated at \$16.8bn. This is the sum of the benefits presented in Tables 7.3 to 7.8 in the previous chapter. As found in similar studies, the largest contribution by a considerable margin comes from health benefits, even after allowing for the cost of ACC active claims related to sport and recreation.

The health benefits total \$9.0bn, or \$8.4bn net of the ACC active claims. This accounts for close to one-half of the net social value generated by recreational physical activity in Aotearoa New Zealand. The second largest domain is subjective wellbeing (\$3.3bn, or 19.7%), closely followed by work, care and volunteering (\$3.09bn). In comparison, the contributions of recreational physical to the other domains are lower, although this may reflect the lack of evidence currently available for valuing these benefits.

The estimated Net Present Value (that is, the difference between the value of the outcomes and inputs) is \$8.86bn, which implies a Social Return on Investment of 2.12. **For every \$1 invested in recreational physical activity, \$2.12 worth of social benefit is generated.**

Table 8.1: Summary of the SROI Calculation

		Value (\$m)
Inputs	Households	2,954.2
	Central Government	623.4
	Local Government	1,004.5
	Private sector	279.9
	Voluntary sector (non-financial inputs)	3,086.3
Inputs total		7,948.3
Outcomes (social value)	Health	9,016.7
	Quality of Life, life expectancy	8,336.5
	Prevention of diseases linked to physical inactivity	680.3
	Subjective wellbeing	3,315.2
	Increased life satisfaction adult participants (18+)	3,180.1
	Increased happiness young people participants (5-17)	56.2
	Increased life satisfaction adult volunteers (18+)	78.9
	Income, consumption and wealth	888.5
	Higher output from reduced absenteeism	888.5
	Work, care and volunteering	3,086.3
	Replacement value of volunteering	3,086.3
	Family and friends	1,126.4
	Enhanced social capital created by participation	1,126.4
Safety	-620.1	
Increase in the number of accidents and injuries related to sport	-620.1	
Outcomes total		16,813.0
Net Present Value		\$8,864.7
Social Return on Investment		2.12

8.3 Sensitivity analysis

One of the key components of an SROI analysis is to test the sensitivity of the SROI to variations in data used. The research team is confident about the inputs data, and so we tested the sensitivity of the benefit assumptions in the SROI model (base model) in two ways. First, we tested the implications of alternative assumptions for four key components in the benefits:¹⁷

1. The health benefits.
- 2a. The subjective wellbeing benefits.
- 2b. The amount of subjective wellbeing benefits accounted for by the health benefits.
- 2c. Combination of (2a) and (2b).
3. The income, consumption and wealth benefits.
4. The social capital benefits

Second, we combined the Low assumptions for the four components, and we combined the High assumptions for the four components, to present an overall picture of the range of possible values depending on different assumptions.

1. Health

For the valuation of the quality of life and life expectancy outcome in the base model, we used a value provided by the Waka Kotahi, New Zealand Transport Agency (2020). This was the average of two values using different methodologies. Table 8.2 uses the lower value for the Low estimate and the higher value for the High estimate. The calculated SROIs range from 1.49 to 2.74.

Table 8.2: Sensitivity Analysis – Health Benefits

	Low	Base	High
Value of Life Quality and Expectancy	\$1,801	\$4,498	\$7,194
Health Benefits	\$4,017.5	\$9,016.7	\$14,012.2
Calculated SROI	1.49	2.12	2.74

2a. Subjective wellbeing estimated benefits

The subjective wellbeing estimates were calculated using data from Simetrica Jacobs (a). Sport NZ provided the research team with a table that presents lower and upper bounds for these data, which have been used in Table 8.3a. The calculated SROIs range from 2.04 to 2.19.

¹⁷ The replacement value of volunteering is not a sensitive item, because it is matched by the same figure on the inputs side of the SROI model. The ACC Active Claims figure is small, and an accurate measure of the current costs of accidents related to sport and recreation.

Table 8.3a: Sensitivity Analysis – Subjective Wellbeing Benefits

	Low	Base	High
Subjective Wellbeing Estimates	Lower Bounds	Midpoints	Upper Bounds
Subjective Wellbeing Benefits	\$2,700.4	\$3,315.2	\$3,926.8
Calculated SROI	2.04	2.12	2.19

2b. Influence of health benefits on subjective wellbeing benefits

The text for Table 7.4 in the previous chapter noted an adjustment made to the subjective wellbeing estimate to avoid double counting of health impacts. The assumed ratio in the base case is 25%. Table 8.3b sets this percentage to 50% for the Low estimate and to zero percent for the High estimate. The calculated SROIs again range from 2.04 to 2.19.

Table 8.3b: Sensitivity Analysis – Health and Subjective Wellbeing Benefits

	Low	Base	High
SW accounted for by health benefits	50%	25%	0%
Subjective Wellbeing Benefits	\$2,744.3	\$3,315.2	\$3,886.1
Calculated SROI	2.04	2.12	2.19

2c. Subjective wellbeing – combined assumptions

Table 8.3c combines the assumptions in Table 8.3a and 8.3b. The calculated SROIs range from 1.96 to 2.26.

Table 8.3c: Sensitivity Analysis – Subjective Wellbeing Benefits, Combined

	Low	Base	High
Subjective Wellbeing Estimates	Combined	Combined	Combined
Subjective Wellbeing Benefits	\$2,104.9	\$3,315.2	\$4,474.5
Calculated SROI	1.96	2.12	2.26

3. Income benefits

The income benefits are an estimate of the reduction in lost output due to lower absenteeism, using data from Waka Kotahi, New Zealand Transport Agency (2020). Following that report's advice, the initial estimate was reduced by 50%. The sensitivity analysis in Table 8.4 uses 100% and 0% as alternative assumptions. The calculated SROIs range from 2.00 to 2.23.

Table 8.4: Sensitivity Analysis – Income Benefits

	Low	Base	High
Reduction in estimated income gains	100%	50%	0%
Income Benefits	\$0	\$888.5	\$1,777.0
Calculated SROI	2.00	2.12	2.23

4. Social capital benefits

The estimate of social capital benefits in the base case comes from Gratton et al. (2018). Simerica Jacobs (a) included an estimate of the subjective wellbeing benefits of membership in a sports club. The research team did not include this estimate in the base case because it is likely to be strongly associated with social capital. Its value is lower than the value obtained from Gratton et al. (2018). Table 8.5 therefore uses this lower value for the Low estimate and adds the two values for the High estimate. The calculated SROIs range from 2.07 to 2.21.

Table 8.5: Sensitivity Analysis – Social Capital Benefits

	Low	Base	High
Social Capital Benefit Estimate	\$766.3	\$1,126.4	\$1,892.6
Family and Friends Benefits	\$766.3	\$1,126.4	\$1,892.6
Calculated SROI	2.07	2.12	2.21

5. Combined low assumptions and combined high assumptions

We tested the sensitivity of the base model by using alternative low values for all outcomes (Low model) and then alternative high values for all outcomes (high model). Table 8.6 displays how the alternative low and high values impacted on the SROI. These combine the data in Tables 8.2, 8.3c, 8.4 and 8.5 above. In the low model, the SROI falls to 1.18, which is still above 1.0. In the high model the SROI rises to 3.10.

Table 8.6: Sensitivity Analysis – Combined Assumptions

	Low	Base	High
Health Benefits	\$4,017.5	\$9,016.7	\$14,012.2
Subjective Wellbeing Benefits	\$2,104.9	\$3,315.2	\$4,474.5
Income Benefits	\$0	\$888.5	\$1,777.0
Volunteering Benefits	\$3,086.3	\$3,086.3	\$3,086.3
Family and Friends Benefits	\$766.3	\$1,126.4	\$1,892.6
ACC Active Claims Sport	-\$620.1	-\$620.1	-\$620.1
Total Value of Outcome Benefits	\$9,354.9	\$16,813.0	\$24,622.5
Inputs	\$7,948.3	\$7,948.3	\$7,948.3
Calculated SROI	1.18	2.12	3.10

CHAPTER 9: CASE STUDIES - KAUPAPA MĀORI OUTCOMES

9.1 Introduction

Māori are the Indigenous people of Aotearoa New Zealand and have a legal Treaty relationship with the New Zealand Government, Te Tiriti o Waitangi. Sport NZ is guided by the Sport and Recreation New Zealand Act 2002. Within the Act, Section 8 states: The functions of the agency are to promote and support the development and implementation of physical recreation and sport in a way that is culturally appropriate to Māori.

The purpose of this chapter is to report on the outcomes articulated by Māori stakeholders in this research that are not monetised, and therefore not within the monetary calculation of the SROI. Māori have their own understanding of intergenerational wellbeing that draws on cultural values, beliefs, social norms and Indigenous knowledge (Kukutahi et al., 2017). This section describes these outcomes. The discussion draws on two sources of data: reporting; data provided to Sport NZ through He Oranga Poutama (HOP) providers (see Appendix A4 for summary), and interviews with six key Māori stakeholders. The case studies were verified with participants.

The data gathering, analysis and writing of this section is through a Kaupapa Māori lens, by Māori for Māori¹⁸. Kaupapa Māori is centred in Māori reality and upholds the mana and integrity of the participants, where the concerns and needs of Māori are the focus (Cram, 2009; Pihama, Cram and Walker, 2002; Smith, 1999).

9.2 Challenges with methodological approach

In the 2017 evaluation of He Oranga Poutama, KTV Consulting recommended that Sport NZ 'consider using a social return on investment framework to determine value for money' (p.38). However, as Guiso et al. (2006, p. 23) write, 'culture is a challenging factor to measure in relation to economic values and attitudes because it is broad, and the sheer ubiquity of ways it may influence economic activity makes it difficult to devise testable measures and hypotheses to usefully analyse the relationships between these somewhat nebulous variables'.

To consider economic value without valuing the immeasurable, intangible cultural outcomes of sport and recreation to Māori, reinforces traditionally Western capitalist values. Māori are wary of distinctively Western deficit approaches to Māori development (Smith et al., 2015). The valuation of life and sickness is not founded in Te Ao Māori (KTV Consulting, 2017). However, Māori are significantly overrepresented in health inequalities and continue to have higher rates than non-Māori for many health conditions and chronic diseases, including cancer, diabetes, cardiovascular disease and asthma (Ministry of Health, 2015). Western

¹⁸ Data was gathered, analysed and this section was written by Māori researchers from Ihi Research.

philosophical positions of health are very different to Indigenous understandings of health and illness (Mill, Reid and Vaithianathan, 2012), and this creates tension when measuring health outcomes and using these measures to make policy decisions (Willing et al, 2020).

A research approach that champions ‘Māori success as Māori’ is a preferred approach to understand what works for Māori, and under what conditions (Smith et al., 2015). It is within this lens that we present the data in this section in order to understand how Māori experience sport and recreation ‘as Māori’ and what outcomes, measurable or not, are valued by Māori.

9.3 Case study 1 - Māori National Sporting Organisations

In the early 20th century, Māori began forming their own sports teams. Māori sporting associations were founded in various sports. The first official national Māori rugby team was selected in 1910, prior to George Nepia playing for the All Blacks. From the 20th century, rugby league, hockey, golf, tennis, netball, touch rugby, and basketball have all formed national organisations to support Māori participation and success. Māori NSOs (National Sporting Organisations) are essentially an anomaly within the sector, as a result of their status, Māori NSOs are volunteer-driven organisations that must source their own funds and develop their own infrastructure to survive (KTV Consulting, 2017).

As a result of limited funding and/or infrastructure, Māori NSOs generally focus on providing one major Māori tournament each year. A previous evaluation commissioned by Sport NZ noted that, “The underlying philosophy for Māori NSOs is closely aligned with Te Whetu Rēhua, whereby Māori NSOs use their sports as catalysts to achieve broad social outcomes for their participants” (KTV Consulting, 2017 p. 26). The listed outcomes included:

- Promote health and wellbeing
- Connect participants to Te Ao Māori and their whakapapa
- Engender pride in being Māori
- Promote the use of te reo
- Promote whānau cohesion
- Encourage intergenerational participation
- Develop life and career skills
- Promote confidence and leadership
- Promote participation ‘as Māori’.

This case study presents an example of a Māori NSO, Māori Touch NZ. Māori Touch is focussed on growing iwi connection and has seen an increase year on year of iwi teams. Māori Touch NZ promotes te reo Māori, alcohol free, drug free and smoke free and this is embedded within the Māori Touch NZ philosophy (KTV Consulting, 2017).

Carol Ngawati – Māori Touch

Māori touch pioneer Carol Ngawati describes the kaupapa around touch as always being about the broader outcomes around a place, a space, a time, and a vehicle, for being Māori. Carol co-founded the Waitakere Māori Touch and Māori Touch New Zealand organisations and helped establish the World Indigenous Touch Competition.

“Part of our kaupapa, which has been contrary to the mainstream code, is around access, and making sure it was always cost-effective. The target was always rangatahi, and now the way they lead the tikanga and growth in their reo and who they are is phenomenal.” She says in the beginning, it was about a group of people wanting their kids to have a positive experience through touch. “Not one that was consumed with alcohol and all the things that we didn't want our kids to be involved in. That was the driver. Now rangatahi are leading with support of their kaumātua, not the other way around.”

Carol believes with that comes identity. “I think people trust that the environment is tika. It's never changed from day one. The kaupapa has stayed the same, the format's still the same.”

Carol explains the touch kaupapa was never sufficiently resourced to allow feedback monitoring, so it was always about evolving. “As a committee member, we just do jobs as required. It's more evolved into an event being run by Māori, and hapū and iwi; they trust that this Māori tournament is for them, and so they participate. We're coming here as Māori in the first instance. You're representing your iwi, hapū, we're not responsible for you. Your iwi, hapū are responsible for you. We just keep putting the kaupapa in front of people.”

While funding has always been challenging it has also created strengthening opportunities. “There's no funding that comes to Māori touch as an organisation. We really have struggled. It's all volunteers, and relationships, like Rotorua Lakes Council, Te Arawa, they wanted us to continue with the tournament in Rotorua, so supported us and that's why we were able to hold the tournament at the international stadium, and that lifted the whole tournament which is just amazing. Most of the participation is also whānau driven. We've had kids from remote areas and because most of it is self-funded it does rely on who is keen. Some organisations contribute. They might use a school van or stay with whānau. Each area is different, but it is very rarely we get a team from the South Island or Australia in recent tournaments, only because of the cost.” While financial barriers have been challenging, Carol believes organisations, like Sport NZ, are able to respond to Māori sport with the increase in understanding of the contribution that Māori Sport has made to the wellness of Aotearoa, through the vehicle of sport.

Other broader outcomes have included Pā Wars touch tournaments which started springing up all over the country. “They had the same kaupapa and to me that's real mana motuhake.”

Carol says a challenge is that the mainstream interpretation of sport is quite different from Māori sport. “When I think of Māori netball and even waka ama, the broader outcomes of

whanaungatanga and joy and just being Māori contributed to our wellness. We've used our networks through sport to get to being well, to being better balanced, happier people. I think it's been underrated, it's like actually if people are happy, you don't get depressed. Māori are happy when they're together and they're playing sport and they're proud and ... we are happy. Yeah. Underrated." She uses Iron Māori as an example of what it's done to Maoridom, health and wellbeing.

Carol sees other benefits such as whakapapa links and for the referees who now have a vocabulary for refereeing in te reo. "They teach each other, they have a cultural advisor and their own benchmark around te reo." There is evidence of hapū development through teams like Ngāti Wairere where a group of young men are bringing their kids up in an environment with positive, Māori values. "You know, it's marvellous really, they formed a whanaungatanga link with each other. What an investment as parents, if I was one of those boys' parents, I'd be so proud."

"It's just all those things that we value, but it has to be deliberately taught. Māori sport has been an opportunity to deliberately be Māori, whether you like it or not. Sorry about it. This is what it looks like. Or don't come ... A couple of years ago, I had two moko playing for the first time. I remember looking at them and thinking, well, we've come full circle, this is why we've done it. So, our job is done."

9.4 Case study 2 – Iwi Sports Trust

Te Papa Tākaro o Te Arawa is a non-profit, iwi mandated, registered charitable trust and is governed by a board of iwi elected trustees representing hapū of Te Arawa. It was launched on 21 Oct 1993 and was the country's first iwi and Māori health sports trust.

Paora Te Hurihanganui - Te Papa Tākaro o Te Arawa iwi sports Trust

Achieving holistic health and wellbeing through participating in sports 'as-Māori' is the driving kaupapa for Te Papa Tākaro o Te Arawa iwi sports trust. Former CEO Paora Te Hurihanganui says whether it's a sporting pathway or physical pathway, they are providing opportunities and opening doors so whānau can realise their dreams and aspirations.

Paora says when it comes to holistic health benefits it's all to do with the reconnecting and the re-birthing of whakapapa and mātauranga. "That's what drives everything, not the sport. The sport is the 'what.' The 'why' is more important. If you have a better knowledge about who you are and what your purpose is here, you're going to get health and wellbeing along the way."

He describes the importance of working with the whole whānau. "The sports and activity part, which is the feel-good, coming together, having fun and intergenerational experiences, working together on a kaupapa, playing against other whānau members. The intergenerational perspective with kaumātua and their mokopuna in the same teams

interacting with their own and wider whānau members. The flip side is the physical activity, which is more in the pursuit of advancing health, wellbeing, or fitness, or focused on becoming a representative, a higher-level athlete.”

“It's about offering great experiences, and easy access experiences for whānau.” A key is intergenerational engagement. “For instance, if we're having the Te Arawa Games, there's a fitness programme running for those whānau members who want to get fit, but at the same time we're working in kōhanga reo, so we're getting motor skills, and our babies ready. So, when they turn up at these games, they're familiar with them, they know it, they see older whānau members doing it and they just slip in.”

Paora says in 1993 Te Papa Takaro o Te Arawa created the He Oranga Poutama programme, and pitched that to the Hillary Commission, which is now Sport New Zealand. “We asked the question, as Māori, how would you do things? As Māori, how would you run that sport? As Māori, how would you increase fitness? For us it would look like traditional activities, or any activities, in a natural environment. Oceans, maunga, rivers, marae. Because those are important sites for us to gain overall wellbeing. We started sharing stories, activities, and getting whānau fit and well in a natural environment. That's where we were different.” Paora says traditional environments, like the outdoors, are more enduring and sustainable. He describes the natural environment as a metaphor for change which inspires a change of mindset and how people feel about themselves and about the environment.

Paora says aspiration is key. “We try to motivate you, so your whakapapa is extended long-term. The benefit goes through you into your grandkids and further on. When we're looking at inspiring others to aspire, the greatest form that's always been here has been their natural environment, and we are drawn to that as Māori.”

He says te reo and tikanga are key aspects of an ‘as-Māori’ pathway. “In the reclamation of understanding ourselves, we are trying to re-language our own internal language as well as the language that we connect through activities. So, there are health benefits and habit-forming benefits and benefits of reconnecting with the whenua and intergenerational benefits of connecting within whānau, benefits of te reo and revitalising those traditional Māori sports as well.”

There's also a focus on being inclusive, making sure there is an ability for whānau to turn up and just watch. Preparing the kai, watching, and being the support people in the background is a valuable contribution. Paora says whanaungatanga is something mainstream sports don't focus on to the same extent as Māori. If you look at any Māori rugby club, whanaungatanga is of primary importance. “They make sure you have communal kai, you have fun in meetings, you have the kids playing before the adults, because you want everyone there at the club doing that same thing. Not all clubs do that. Coming together and playing, and interacting with people, and socialising. They are benefits, no matter what the sport it is.”

For some the transition has been difficult. Paora says they had to think about how they catered for whānau who just wanted competition. “It was strategic to move collectives as opposed to moving individuals. Because if we had an individual focus, you could get that from your personal trainer down at the gym. But if we're trying to move groups like whānau being smaller, and hapū, marae being bigger and bigger, and then the iwi, and then we take that to an international stage for the Indigenous Games or the Ancestral Games, or around the Pacific; whanaungatanga and the way you behave is far more valuable. The contribution you have wider to the impacting of your people that are around you, is far more important than winning. The reason why what we did was very successful, and still is successful, is because people have joy, they can give it back to the collective. It's not just about your own health, it's about the wider collective, and they can have fun along the way.”

Paora is also supportive of boards and volunteers purposefully not being paid to provide a service. Rather, the investment was in raising capability. “In Māori and iwi spaces, if they're representing their iwi, they've got a higher service point. They're there to serve their people. Once you pay them, they're not serving anymore. It's the same with volunteers. You provide something in that space, so they grow, they develop, they strengthen. When we had any of our games, we would get a marae to volunteer, and they would host those games in their own unique way. We took time to train those volunteers, to give templates, to provide some structural training and develop the volunteers along the way. Then on top of that, you bring in the other volunteers so the whanaungatanga or the relationships start to happen, and they know they can call on those people in the future. Some marae used the sports as the catalyst for change, then they started having Whānau Days and wānanga. Then they put a kapa haka group into Matatini. They went from strength to strength. The whole level of investment might have been a little bit higher, but the outcomes and the benefits were greater in the end because we shifted people. A whole lot of people. This is a uniquely iwi-centric model. Investing in high-level workforce development, by saying here's an opportunity to learn, we'll pay for it. All the other development opportunities for the individual or for that marae, happen on the side throughout the year, and are some of those cross-benefits which are also celebrated.”

Paora said finance was challenging as they received no capital or strategic funding. Operating on much less money he believes they produced equivalent outcomes to a Regional Sports Trust. “We had to go and search just for survival mode, search for health, Whānau Ora money, local authority money, philanthropic, the Gaming Trusts, and things like that.”

“I did a cost analysis on waka ama, and the Boys' Brigade got exactly the same amount of investment as waka ama. That year, waka ama had four times more participants than Rowing New Zealand, and Rowing New Zealand got something like \$6,000,000, and waka ama gets \$50,000, and so did the Boys' Brigade. And I'm looking at it, one's Boys' Brigade; church related. This is a whole nation of Māori and non-Māori because waka ama is not just Māori, waka ama is general. It just has a Māori value-base system underneath it. And we shift

thousands across multiple weeks and the investment is minor compared to rowing but it's an Olympic sport.”

Paora believes Sport NZ needs to take the ownership of the re-languaging in sport, activity, and fitness with a clear te reo strategy. “We have te reo strategies for everything else, but sport. It's key phrases that have an ideology and a culture that sit behind them, that are non-negotiable when we talk. So not only is there strategy, there are words also that describe strategies, and feelings, and emotions, and movement of people, and changing of ideas. They are very important from a cultural perspective and from a te reo perspective, and I think Sport NZ could have a key role to play in that space.”

9.5 Discussion

The historical trauma of colonisation inflicted upon Māori and other Indigenous peoples is well documented (Reid and Robson, 2007; Durie, 2003 and 2012; Stephens et al., 2006). Through land alienation, economic impoverishment, mass settler immigration, warfare, cultural marginalisation, forced social change and multi-level hegemonic racism, indigenous cultures, economies, populations and rights have been diminished and degraded over more than seven generations (Moewaka-Barnes and McCreanor, 2019, p. 19).

Fragmentation is a key feature in the alienation of Indigenous peoples and the disordering of all aspects of their being. Smith (1992) writes that fragmentation is a systematic process that occurs under colonialism operating through multiple sites. Fragmentation culminates in processes of re-presentation, disordering, disruption, renaming and reclassification of Indigenous systems and worlds. These ‘principles of disordering’ were implemented through a range of colonial practices.

Central to the process of fragmentation was the intentional deconstruction of whānau, the primary unit in an Indigenous Māori collective community of care. Māori collectivism and its economy were subject to a series of thinly disguised rhetorical and legal attacks ostensibly to civilise Māori but in reality, to marginalise them and wrest control of their lands and other natural assets (Taonui, 2016). As late as the 1960’s, pepper-potting policies dispersed Māori whānau moving into urban areas. The policy intentionally sought to assimilate Māori by isolating them from one another, breaking down traditional behaviours and lifestyles.

The ‘disordering’ and ‘disruption’ of collective Māori approaches decreased community resources and heightened the risk that harm would occur. Sport and recreation provide a fun and enjoyable platform for Māori to gather, compete, have fun and share normal cultural practices of whakawhanaungatanga (kinship), awhi (help), tautoko (support) and aroha (care). It provides a forum to gather whilst also allowing Māori to enact shared principles and values, become healthier, have fun and develop careers. Sport and recreation are hugely important to Māori (KTV Consulting, 2017).

‘As-Māori’ sporting organisations utilise sports as a vehicle to reclaim and reinvigorate collective communities of care. This is an important distinction from non-Māori sporting organisations that view sporting outcomes and successes as their primary reason for existence. It is evident that distinctively ‘as-Māori’ sporting organisations and movements engage participants who are beyond the reach of mainstream sporting organisations. Their reasons for participating align with the values and outcomes of the Māori organisations they join and are described below.

This section provides a description of the outcomes valued by Māori participants. **These outcomes are additional to the health and exercise benefits noted for all participants in the SROI.**

Outcome 1: Intergenerational participation strengthens whānau

Māori sports focus on engaging the whole whānau. Consequently, the entire whānau are included: kuia and koroua (grandparents), mātua (parents), tamariki (children), mokopuna (grandchildren) and whanaunga (relatives) (KTV Consulting, 2017, p.17). Opportunities for participation vary. Teams are often intergenerational and/or whānau based either at a whānau, hapū or iwi level. Those not actively competing fill volunteer and administrative roles. Intergenerational participation strengthens whānau connection and wellbeing.

This observation has implications for how Sport NZ gathers evidence on the value of sport and physical recreation for young participants. Exploring better outcomes for tamariki and rangatahi in the context of their whānau would help fill that gap.

Outcome 2: Reclamation and protection of mātauranga Māori strengthens Indigenous knowledge systems

‘As-Māori’, whānau-led sports events are specifically designed to provide opportunities for the active utilisation of various forms of mātauranga Māori. By deliberately incorporating te reo Māori, tikanga and culture into their activities, these intergenerational events enable knowledge to be passed down from kaumātua and kuia to younger generations. It was noted that mihimihi, karakia, haka tautoko, pōwhiri, hui, wānanga and whakawhanaungatanga were common practises at these events and sports programs (KTV Consulting, 2017; McKegg et al., 2013). It should also be noted that the mātauranga associated with traditional Māori sports may have been lost if not for the actions of Māori sports organisations.

In December 2020, Minister for Social Development, Carmel Sepoloni noted, “COVID-19 brought into sharp focus significant existing risks to mātauranga Māori, which in many cases is held by a small number of knowledge holders and arts practitioners – often kaumātua – who are particularly vulnerable to the global pandemic. It’s imperative that we support iwi, hapū and whānau to protect and revitalise this irreplaceable mātauranga, which is central to their cultural identity and wellbeing. Mātauranga Māori is of vital importance to Aotearoa and its people.”

Outcome 3: Participation provides opportunities to reinforce and practice tikanga Māori strengthening 'a Māori way of life'

Generally speaking, tikanga are Māori customary practices or behaviours. The concept is derived from the Māori word 'tika' which means 'right' or 'correct' so, in Māori terms, to act in accordance with tikanga is to behave in a way that is culturally proper or appropriate (Victoria University of Wellington, n.d.). Tikanga Māori, mātauranga Māori and Māori values such as manaakitanga and whanaungatanga are interconnected and mutually reinforcing. Tikanga can include traditional Māori cultural norms such as, but not limited to, welcoming groups through pōwhiri, following speeches or thanking ringawera with waiata, or performing haka. Tikanga can also incorporate expectations such as being alcohol free, smoke free or reducing negative environmental impacts. There is evidence in the case studies of tikanga around health behaviour and preventing harmful health behaviours like alcohol consumption.

Outcome 4: Whakawhanaungatanga (kinship) ties are strengthened through participation

Whakawhanaungatanga is the deliberate strengthening of familial ties, social connections and networks. Whānau are the building blocks of Māori society and as such, their wellbeing is critical to the flourishing life of their whānau, hapū and iwi (Turia, 2010). Collective outcomes, rather than individual outcomes, are the focus of 'as-Māori' events and organisations as extended whānau meet, compete and support each other. Importantly, Māori events provide opportunities for whānau connection through aspirational activities that grow pride in being Māori.

Outcome 5: Cultural identity is strengthened through participation in Māori sport and recreation

Cultural identity is an important contributor to people's wellbeing (Ministry of Social Development, 2003, p. 82). Sport and recreation provide a place, space and time for being Māori. Māori is not a homogenous group. The benefits of the approach therefore vary depending on the participant. Those who are speakers of te reo Māori, who live a life steeped in mātauranga Māori and living according to tikanga, can feel comfortable to participate without leaving their culture at the gate. Alternatively, 'as-Māori' sport provides those who have little or no te reo Māori, or who may be disconnected from their culture, with a safe way to reconnect.

Mato (2011) findings suggest that Māori sports events and programmes in Auckland are an important part of strengthening cultural identity for Māori living in urban areas. An annual inter-iwi sports competition may promote whakawhanaungatanga amongst urban Māori in Auckland and can also be used as a method to support iwi development. Cultural identity is widely recognised as important for wellbeing, since it 'helps people feel they belong and gives them a sense of security ... linked with positive outcomes in areas such as health and education' (Ministry of Social Development, 2016, p. 175).

Outcome 6: Māori sport and recreation provides opportunities to connect to the whenua 'as Māori'

In te reo Māori the word whenua has two meanings. Firstly, it means land. Secondly, placenta. This illustrates the close relationship between Māori and the land that supports and sustains them. Māori identity is tied to the whenua, their maunga, awa and moana. Whakataukī such as 'Hoki atu ki to maunga kia purea ai i e koe i ngā hau o Tāwhirimātea' (Return to your mountain and be cleansed by the winds of Tāwhirimātea) refer to the healing properties of whakapapa whenua.

Historically, physical activity was integral to everyday life and was seamless with te taiao, the environment. It was purposeful and meaningful, so it had mana, from gathering kai for the table to representing your marae on the sports field (Sport New Zealand, 2020, p. 3). Urbanisation requires deliberate efforts to attract Māori back to their tūrangawaewae. Traditional and contemporary Māori sports play a significant role in drawing Māori back to their traditional whenua and engaging them in activities that increase their connection to the land. This outcome includes connection to marae whenua. Evidence supports that Māori sports and recreation contributes to creating a sustainable marae that is essential for a Māori way of life and wellbeing. He Oranga Poutama, 'Marae Fit' contributes to revitalisation of local marae.

Outcome 7: Rangatahi experience leadership through Māori sport and recreation

The intergenerational nature of 'as-Māori' sports provides opportunities for rangatahi to experience supported leadership development. 'Ka pū te ruha, ka hao te rangatahi' is a traditional whakataukī often quoted to denote an intergenerational transition or shift from one generation of leaders to the next. Within a Māori sports context, leadership opportunities are multi-dimensional and not limited to leading a sports team. Because of the holistic nature of the activities this could include leadership in sports administration; refereeing; event management; the arts (waiata, uniform design, haka); te reo Māori (public speaking, discipline specific vocabulary); catering and other areas. It is evident in the case studies that this development is planned and deliberate.

Outcome 8: Māori sport and recreation are an expression of mana motuhake

Māori sporting organisations have created successful events despite a lack of support from mainstream funders. This resilience and self-reliance have enabled Māori to maintain and exercise mana motuhake (independence, sovereignty, authority – mana through self-determination and control over one's own destiny). In doing this, Māori NSO's and other organisations have maintained their own autonomy and have been able to assert their authority over their own sport and recreation activities. The evidence from the case studies and He Oranga Poutama reporting review (see Appendix A4) indicates that Māori NSO's and health providers continue to fight for funding equity.

9.6 Summary

This section of the wider SROI report describes the outcomes that are valued by Māori stakeholders that are not monetised (on the advice from stakeholders that this would not be appropriate), to ensure that sport, recreation and health policymakers value these outcomes. The economic measures of health that are currently used to value and compare health states within Aotearoa New Zealand are underpinned by Western values and philosophical assumptions that provide a narrow conceptualisation of health that does not align with Māori values or worldviews (Mills, Reid and Vaithianathan, 2012). It is important to acknowledge this within this report, as it is likely this SROI will be used to develop policy, allocate resources and determine what services are provided in sport and recreation.

Further research is needed to develop Māori measures of health, sport and recreation that reflect these valued outcomes. Indigenous measures of health will almost certainly look very different to the economic measures of health that are currently used, as the philosophical assumptions underpinning it will be informed by Indigenous worldviews (Willing et al., 2020).

CHAPTER 10: CONCLUSIONS AND RECOMMENDATIONS

10.1 Summary

The research presented in this report measured the Social Return on Investment of recreational physical activity in Aotearoa New Zealand. The research was commissioned to by Sport NZ to better understand, demonstrate and communicate the contribution of recreational physical activity to the wellbeing of people living in Aotearoa New Zealand.

The research team found that recreational physical activity generates considerable value to society beyond the traditional economic measures identified in previous studies of the value of sport and recreation. It identified a wide range of benefits to society, spanning across several domains of wellbeing, including health; subjective wellbeing; income consumption and wealth; work, care and volunteering; family and friends; and safety. It revealed that the concept and understanding of value from the perspective of tangata whenua and all New Zealanders varies considerably, and that for some outcomes, it is simply not appropriate, desirable, or possible to monetise the contribution of recreational physical activity.

Nine outcomes were included in the SROI monetary valuation of recreational physical activity. The combined value was **\$16.8bn**. The largest valuation was for health (\$9.0bn), which included the outcomes of better quality of life and expectancy; and prevention of diseases attributable to physical inactivity. The value of the health outcomes alone accounted for 53.6% of the overall social value generated. The study demonstrated that investments in recreational physical activity yield a positive return, and that **for every \$1 invested in recreational physical activity, \$2.12 worth of social value is generated for individuals and society**¹⁹. Given the relatively small contribution of the public sector to overall investment, it is likely that if examined in isolation, the returns to the public sector would be even greater.

Importantly, the study identified the additional value of recreational physical activity to the Māori population in Aotearoa New Zealand. In particular, it revealed the significant contribution of recreation to Māori wellbeing through strengthening intergenerational relationships and reinforcing cultural values, beliefs, social norms and knowledge. 'As-Māori' sporting organisations utilise sport as a vehicle to reclaim and reinvigorate collective communities of care. These outcomes were clearly articulated in the case studies presented in the report. The presentation of non-monetised outcomes resulting from recreational physical activity alongside the monetary valuation of other outcomes in this report is an important first step in recognising and understanding the broader value of recreational physical activity. However, further research is needed to enable a fuller understanding and for equal recognition to be given to these outcomes.

¹⁹ It is not possible to draw comparisons with SROI studies in other countries as the scope, stakeholder outcomes valuation techniques and proxies vary from study to study.

10.2 Limitations of the study

This study attempts to understand and measure the change experienced by stakeholders as a result of taking part in recreational physical activity in Aotearoa New Zealand. However, it is impossible to capture all changes that beneficiaries may experience because of taking part in recreational physical activity.

In common with other international SROI studies of sport and physical activity, a number of outcomes identified in the literature and by stakeholders have been acknowledged, but were not able to be included in the New Zealand SROI for various reasons including, a lack of robust evidence linking recreational physical activity with social outcomes and a lack of empirical data on the outcomes identified. The monetary valuation included limited outcomes relating to family and friends, despite the large volume of evidence identified in the literature review relating to social and community development. These outcomes are likely to be material, pointing to the need for more research to produce the quantitative data that would allow their value to be estimated.

Many of the reported impacts in this domain were based on small scale qualitative research, meaning that it was not possible to quantify and monetise value in this domain fully. Given the estimates for social capital were based on research from Australia, this limitation merits further investigation. In addition, as discussed in section 9.1 the SROI valuation has omitted non-monetised outcomes that were identified by the Māori population, hence the SROI ratio only represents a partial account of value.

The measurement and use of subjective wellbeing data are relatively recent in the literature. There are concerns that some studies are inflating their estimates using their method. Corry (2018), for example, warns, that “this is asking too much of the data” and “we are taking estimates of wellbeing we know to have many flaws and pushing it very hard indeed”. In this study, we have been careful to use sources that have been accepted by important New Zealand agencies (the Treasury, Ministry of Health and Waka Kotahi, New Zealand Transport Agency), but we would expect this literature to continue to develop.

Importantly, the measurement and valuation of outcomes pertaining to children and young people from taking part in recreational physical activity, remains a significant omission from this and other SROI studies of sport and physical activity. The Aotearoa New Zealand study has for the first time included a value for young people and subjective wellbeing, nevertheless, it is still likely to underestimate the true value of sport and active recreation to this demographic. There is promising evidence to suggest that young people benefit socially and academically from engagement in sport. However, techniques to value these outcomes need to be developed before they can be included in population-level SROI studies in the future.

With the exception of accidents and injuries from sport and recreation, the study also excluded the valuation of unintended, negative outcomes identified in section 6.3. In most cases, this is because of lacking evidence and data on these outcomes.

Finally, the outcomes monetised in this study tend to focus on those derived from general sports participation by the population, rather than outcomes derived from participation by specific groups in response to targeted interventions (such as secondary health programmes for people with diseases, youth development programmes and diversion programmes for at-risk youth). Although the monetary value associated with mass participation in recreational physical activity will always account for the largest proportion of value generated at the national level, based on the quantities of people participating, the exclusion of value attached to targeted interventions risks excluding the stories of change that evidence the greatest difference to some individuals in society.

As a result of the limitations identified above, it is likely that the monetised and non-monetised value of recreational physical activity in Aotearoa New Zealand presented in this study represents a conservative estimate of value for the sector.

10.3 Recommendations

An objective of this study was to set a benchmark for reliable and responsible social impact methods in Aotearoa New Zealand's play, active recreation, and sport sector. The study provides a transparent and conservative account of how the value of recreational physical activity in Aotearoa New Zealand has been calculated, which can also be used as a baseline to compare future studies at the national and sub-national level.

Based on the findings of the study, the research team suggest several high-level recommendations:

1. The study demonstrates that recreational physical activity generates significant value for society across multiple wellbeing domains and outcomes. Furthermore, that the value of these outcomes is greater than the costs of providing these opportunities, making recreational physical activity a potentially cost-effective investment. The research team recommend that Sport NZ use these findings to support cross-government conversations on investment in recreational physical activity for wellbeing outcomes.
2. The research team suggest that the SROI report and findings are widely disseminated to all stakeholders across the recreational physical activity sector, and that together with stakeholders, principles are developed for organisations in the sector on responsible use of methods to estimate social impact. The research team highly recommend that the dissemination of the study and the discussion of the principles include a Māori perspective. Dissemination activities should include stakeholders that

have taken part in the work, and should include internal and external activities, within and beyond the physical activity sector. Dissemination activities should be used to verify the findings of the study more widely.

3. The study identified gaps in evidence relating to the contribution of recreational physical activity to various domains of wellbeing. The research team recommend that the findings of this study are used to identify a list of research priorities for addressing these gaps. Notable omissions and limitations in this study that merit investigation in the future include the measurement and valuation social capital; outcomes for young people; the negative effect of participation; and research to understand how the whole experience of recreational physical activity is built around Māori culture, cultural identify, spirituality and the social connections within the Māori community
4. The purpose of an SROI analysis is not just to prove the value of an activity. Rather, it is to understand what changes and to use this knowledge to optimise the value created from activities. The research team recommend the SROI model is reviewed and updated on a periodic basis, to integrate new and improved evidence on the social impact of recreational physical activity as it emerges. We recommend that the SROI participation and volunteering data is updated bi-annually, or when new participation data becomes available. Furthermore, we recommend a refresh of the entire SROI model every 5 years, to incorporate new outcome evidence and financial proxy data. This approach would build a longitudinal understanding of the contribution of recreational physical activity to the change people experience in their lives, and evidence to inform Sport NZ's management approach to making improvements to activities, initiatives and services in the future.

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APPENDIX A1: SROI Principles

SROI Principle	How the Principle was applied in the study	Additional comments
Involve stakeholders	<p>Stakeholders are at the heart of the SROI process. A range of stakeholder groups were included in the study, including Māori individuals and organisations. They were included through interviews with the research team in describing their own outcomes. They were also involved in identifying other stakeholders using a range of sources and methods, including a stakeholder mapping and engagement exercise, conducted by Sport NZ prior to the start of this study, and with the research team during the study. Stakeholders were also involved in defining the scope, identifying inputs, verifying the research process and findings.</p>	<ul style="list-style-type: none"> • A range of stakeholder groups were included in the study (ch. 4). • We met with Sport NZ and conducted a stakeholder identification exercise from which a shortlist of other stakeholders to interview was identified (ch. 4). • Consultations included a selection of organisations i.e. Sport NZ; Māori groups (5), other groups (4). (Table 4.1/4.2). Additional Māori interviews relative to the other groups were conducted to address lack of evidence. A range of methods were used to engage stakeholders (e.g., interviews; focus group) (ch. 4). Resource constraints meant that direct research with a representative sample of participants and volunteers was not feasible. • Stakeholder involved in defining outcomes in a variety of ways inc. literature, primary research, policy documents. These are summarised in the outcomes map (fig 6.3) (ch. 5/6). • Interview questions are outlined in Appendix A2/A3. • A question relating to materiality was included in the stakeholder consultations (see A2 Q3/A3 Q4). • Evidence from the literature review was used to identify what changes for participants and volunteers. Secondary data sources were used to identify the size of the effect (ch. 3 and A3 Q3). • The literature review identified how Māori outcomes were materially different to outcomes for other stakeholder groups and therefore warranted separate consultation (ch. 3).
Understand what changes	<p>Stories of change are a key part of SROI, and these were investigated through a mix of methods. Stakeholders were invited to discuss the changes they observed in themselves and others through 1-1</p>	<ul style="list-style-type: none"> • The report identifies the scope of the analysis, including the definition of activities and year of study (Section 1.2). • Outcomes for stakeholders are defined in ch. 5. The process for defining positive and negative outcomes is detailed in ch. 4.

SROI Principle	How the Principle was applied in the study	Additional comments
	<p>interviews and a focus group. We documented some of these changes through two case studies. The change process was also investigated through the literature review, the Sport New Zealand Outcomes Framework, Te Pākē o Ihi Aotearoa, the He Oranga Poutama Outcomes Framework and other policy documents.</p>	<ul style="list-style-type: none"> • All outcomes are defined in the outcomes map (fig. 6.3). A subset of outcomes that were monetised is summarised in the value map. The non-monetised outcomes are qualitatively analysed in the case studies presented in ch. 9. • Ch. 6 presents the theory of change which identifies the inputs (provided by stakeholders) used to resource and deliver activities (outputs) which result in outcomes for stakeholders. • The impact of the social investment by the national population is identified through stakeholder consultation, evidence from the literature review, case studies and secondary data analysis. • Ch. 7 identifies the measures used to record whether and the extent to which an outcome has occurred. Typically, the most valid and reliable measures have been selected to represent inputs, outputs and outcomes, as suggested by past research and literature. • Ch. 7 also explains how input, outputs and outcomes are measured, including variables that are non-binary. • The value map identifies the secondary data sources for outputs and outcomes, references for which contain the relevant sample sizes. • The SROI analysis is a snapshot of the continuous process of investment and participation in recreational physical activity. As such, there is no baseline situation but rather a defined impact from different participation levels relative to non-participation.
<p>Value things that matter</p>	<p>The relative importance of outcomes was investigated through the stakeholder interviews and from existing literature and evaluations. The SROI analysis includes seven outcomes that were valued in monetary terms and another two that were analysed qualitatively.</p>	<ul style="list-style-type: none"> • Figure 6.1 and Table 7.1 summarise the estimated value for all the inputs identified by relevant stakeholders for which values were provided. Care was taken to exclude any possible double counting of such inputs. • Table 6.1 identifies the nine outcomes which are measured in the analysis, seven of which were valued in monetary terms (ch.7) whilst for another two it was not possible to reliably value in monetary terms, so they are analysed qualitatively (ch. 9).

SROI Principle	How the Principle was applied in the study	Additional comments
		<ul style="list-style-type: none"> • The value map identifies the specific values relevant to different stakeholders (ch. 7) • Ch. 7 also provides a rationale for the selection of values employed for outcomes. • The sensitivity analysis in ch. 8 explores the consequences of using plausible alternative values. • The value map contains details of the estimation process for valuing outcomes.
Only include what is material	<p>The identification and materiality of stakeholder outcomes was identified by a cascade process of consultation, beginning with the key agency Sport NZ, and progressing through the stakeholder interviews. The outcomes map was generated from various sources, including the literature review, the stakeholder map, the Sport New Zealand Outcomes Framework, Te Pākē o Ihi Aotearoa and the He Oranga Poutama Outcomes Framework. Although early discussions with Sport NZ and previous SROI studies revealed outcomes that were likely to be identified, nothing was pre-determined. The outcomes considered most important by the stakeholders, and those identified as significant in the literature review and policy documents, were included if the data permitted.</p>	<ul style="list-style-type: none"> • The identification and materiality of stakeholders was identified by a cascade process of consultation, beginning with the key agency Sport New Zealand, and progressing through the stakeholder interviews, as detailed in ch. 4. • The main exclusions of stakeholder groups from involvement in the primary research was participants and volunteers. This exclusion was for two reasons – first, insufficient budget to conduct primary research of sufficient scale (there are 1,853,333 adult participants), and second, the good availability of secondary data and literature pertaining to the key issues for participants and volunteers (e.g., Simerica Jacobs (a) and (b)). • The materiality of outcomes was mainly determined by the availability of appropriate quantitative evidence from secondary data sources/literature (ch. 6.4) • The conclusion to ch. 7 identifies outcomes which have been omitted from the analysis and the reasons for this.
Do not overclaim	<p>During the stakeholder discussions, the research team explored attribution, displacement, and deadweight through</p>	<ul style="list-style-type: none"> • The rationale for not including calculations for deadweight, attribution, displacement, drop off and duration are provided at the beginning of ch. 8.

SROI Principle	How the Principle was applied in the study	Additional comments
	<p>the stories of change. Valuations were approached cautiously, with care taken not to double count. Evidence from the literature was used to inform decisions about potential overlapping outcomes (particularly between health quality of life and subjective wellbeing). The research team were cautious in the selection of financial proxies, and used sensitivity analysis to explore the impact of using alternative low and high values.</p>	<ul style="list-style-type: none"> • As highlighted above, the SROI analysis is a snapshot of the continuous process of investment and participation in recreational physical activity (i.e., we assume that the benefits valued in the present-day result from investment in previous years, and investment in the present-day results in time lagged benefits in future years. We have therefore not adjusted for duration, drop-off and discounting and present an analysis for one year only. • Where there was a choice of quantities or values to use in the quantitative estimation process, in the interests of not overclaiming the most conservative options were selected for the base analysis (ch. 6/7). • Financial proxies were inflationary adjusted to reflect the year of study. The potential for double counting was most apparent for the estimation of financial inputs and health benefits. This was eliminated and is explained in ch 7. For example, the health proxy value was reduced by 25% to reflect hypothesized overlap with subjective wellbeing measure (Richardson et al. (2015).
<p>Be transparent</p>	<p>This report comprehensively outlines our assumptions, judgements, data sources, calculations, and valuations throughout the research process. These are transparent and open to challenge. The sensitivity analysis deals with alternative quantities and values, and the research team used conservative assumptions throughout. The Value map identifies all sources and data used.</p>	<ul style="list-style-type: none"> • The sensitivity analysis (ch. 8) deals entirely with possible alternative quantities and values for outputs and outcomes. • A full list of references is contained at the end of the technical report and in the value map. • The value map identifies the main data, with sources, including inputs, outputs and outcomes. The research process and calculations are transparent and detailed throughout the report / value map. • The estimation process was confined to quantities and values identified in credible, reliable sources, from either national agencies or academic literature (ch. 7). Whilst this limited the scope of the analysis (see omissions at the end of ch. 8), it reduced the risk of errors arising from the data.

SROI Principle	How the Principle was applied in the study	Additional comments
Verify the result	Throughout the SROI analysis, the research team have sought to verify key decisions with stakeholder evidence. The SROI analysis will be presented and discussed with stakeholders during a workshop, which will be part of dissemination.	<ul style="list-style-type: none"> • The process of consulting with stakeholders on the theory of change, and the range and relative importance of outcomes is described in ch. 5 but also particularly for the Māori stakeholders in the case studies in ch. 9. • The data sources, financial proxies and SROI model were verified with Sport NZ, and the research team has promised a copy of the report to the stakeholders interviewed in ch. 5. • Further dissemination events with stakeholder groups are planned. • The process of verification of the report’s findings primarily involved the principal stakeholder, Sport New Zealand. This included the Rautaki Māori team. Case studies were also verified with the research participants.
Be responsive	We have made recommendations about how Sport NZ can disseminate, embed, and use the SROI analysis to create more social value and advocate for investment in recreational physical activity in Aotearoa New Zealand.	

APPENDIX A2: MĀORI STAKEHOLDER INTERVIEW GUIDE

Question 1: Based on your experience in your organisation, what **beneficial changes** do people experience as a result of recreational physical activity (this is your activity e.g. touch, Marae fit)?

Types of change might include changes in their circumstances, their behaviour, their capacities/capabilities, their awareness/knowledge or their attitudes/aspirations.

We are interested in changes experienced by persons or groups of people such as:

- Pakeke (adults) and kaumātua (grandparents) participants in recreational physical activity;
- Tamariki (children) and rangatahi (youth) participants in recreational physical activity;
- Whānau (family), friends, neighbours, work colleagues of participants;
- Communities and wider society; and
- Volunteers who help participation.

Question 2: Based on your experience in your organisation, what **negative or unintended changes** do people experience as a result of recreational physical activity? (Using the same categories as Question 1)?

Question 3: Based on your experience in your organisation, can you explain for us which of the changes in Questions 1 and 2 you think would be **most important** for us to investigate in our study?

As well as any explanation from your point of view, we are also interested in changes that:

- (a) Result in large changes; or
- (b) Produce changes that last for a long time (say, more than 5 years); or
- (c) Are uniquely associated with recreational physical activity, so that they probably would not occur without that activity.

Question 4: We are also interested in making sure we do not overlook any **major costs** associated with recreational physical activity. Based on your experience in your organisation, can you give us any insights into the major inputs supporting physical recreational activity, such as:

- (a) Financial inputs from funders, yourself, the private sector and participants.
- (b) The costs of maintaining physical recreational infrastructure, including the relevant natural and built environments; and
- (c) The time commitments of volunteers who help participation.

APPENDIX A3: OTHER STAKEHOLDER INTERVIEW GUIDE

Introduction: Sport New Zealand (Ihi Aotearoa) has commissioned the Agribusiness and Economics Research Unit at Lincoln University to participate in a study of benefits New Zealanders obtain from participation in recreational physical activity, including as volunteers. For this study, we are partnering with the Sport Industry Research Centre at Sheffield Hallam University, and with Ihi Research in New Zealand.

We are approaching your organisation because of your important role in recreational physical activity. We would like to talk with you about what you consider are the major wellbeing benefits from recreational physical activity, drawing on your experience and expertise.

We are thinking not just about the direct benefits to participants, but also about indirect benefits that others may enjoy, including families, friends and the wider community. The discussion would take place by phone or by zoom, and would last between 20 and 30 minutes.

Confidentiality: There is no pressure on you to participate in this study. If you do consent to the discussion, our report would say that your organisation participated in this part of the study, but we would not attribute anything that is said to your organisation. We have already reviewed other studies, including Sport New Zealand's own outcomes framework. The purpose of this study is to check that we are not overlooking any benefits that are important to organisations like yourselves.

Question 1: Based on your experience in your organisation, what **beneficial changes** do people experience as a result of recreational physical activity?

Types of change might include changes in their circumstances, their behaviour, their capacities/capabilities, their awareness/knowledge or their attitudes/aspirations.

We are interested in changes experienced by a full range of persons or groups, such as:

- Members of your own organisation;
- Adult participants in recreational physical activity;
- Children and young people participants in recreational physical activity;
- The families, friends, neighbours, work colleagues of participants;
- Particular communities and wider society;
- Volunteers who help participation; and
- Any other groups we may have missed.

We can go through this list of bullet points one at a time if it helps.

Question 2: Based on your experience in your organisation, what **negative or unintended changes** do people experience as a result of recreational physical activity (using the same categories as Question 1)?

Question 3: Does your organisation collect, or know of, any evidence for these benefits (for example, surveys, datasets, reports, references to research, etc.)?

Question 4: Thinking about the changes identified in Questions 1 and 2, can you rank for us what are the **most important** for our study and why? We are interested in analysing changes that:

- (d) Result in large changes (positive or negative); or
- (e) Produce changes that last for a long time (say, more than 5 years); or
- (f) Are strongly associated with recreational physical activity, so that they probably would not occur without that activity.

Thank you for your participation in this project, which will contribute to improving public policy that supports recreational physical activity.

Our report is likely to be published by Sport New Zealand. If you would like an email notifying you when this happens, please provide an email address which we will use for that purpose only.

Ngā mihi nui

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APPENDIX A4: REVIEW OF HOP ANNUAL REPORT - KEY THEMES IN OUTCOME

DATA

Outcome	Evidence from HOP reporting
Strengthened intergenerational relationships	Grandparents and their grandchildren in the same teams, reports of strengthened whānau connections. Youth are engaged less in physical activity than what they ever have been – they are more likely to engage as a whānau. Intergenerational whānau, hapū, iwi teams. Marae-based activity as a whānau is intergenerational.
Improved nutrition	Evidence of improved nutrition, nutritionists come to kapa haka to talk to you about what nutrition means, how nutrition can help the haka, stamina, breathing, voice. Learning about and returning to ancestral kai – (natural-based foods).
Lost weight	Creation of the Hundy Club and other whānau-based weight management clubs, losing weight through HOP initiatives – supporting one another and learning about nutrition.
Kaumātua health	Improved kaumātua health including increased mobility, increased movement and increased social connection through intergenerational events.
Improves accessibility - low or no costs	Key value of HOP programmes is access – cost should not be a barrier to participation. ‘It has to be as accessible to as many whānau as possible and we will make it as easy as we can’. Ensuring everyone can participate includes providing transport, kai and equipment.
Health and wellbeing from a whānau hauora perspective	Increased fitness motor skills, increased muscle mass reported. A holistic focus on whānau health including spiritual wellbeing/wairua. Inclusion of karakia, blessings. ‘Kapa haka is actually a whanau-based thing’ Marae Fit and other HOP programmes include kapa haka, waiata, haka.
Empowering and educating whānau to look after their own health	Increased knowledge of nutrition and healthy whānau behaviours, Whānau taking ownership over whānau health. Whanau create their own health plans/record aspirations and track goal progress.
Participation in representative events	Training for regional and national sporting representation including Te Matatini. Providing opportunities for rangatahi to represent regionally and nationally – reduction of barriers to participation for whānau representatives. Rangatahi and whānau report sense of achievement.
Connection to the whenua	Recreation in natural environment. Oceans, mountains, rivers and your own marae. Experience of being in their natural environment. Increased utilisation of greens spaces, especially during COVID-19.
Whanaungatanga	Being present at events supporting whānau, connecting with relations, connection to whakapapa and understanding importance of place. Whānau are much more likely to engage as volunteers or organisers if their whānau are participating. A range of ages involved, from tamariki to kaumātua.
Personal identity and confidence	Reclamation of understanding of personal identity and collective identity – (iwi ownership). Feel good connection and bonding in a positive social activity, a positive shift in attitudes. Playing in iwi, hapū teams for event such as Pā wars – whānau reported increased sense of belonging.

Outcome	Evidence from HOP reporting
Revitalisation of culture and language	<p>Traditional games - use of reo Māori-based, whānau led sports events and initiatives are far more likely to incorporate te reo, tikanga and culture into their activities. Mihimihi, karakia, haka tautoko, pōwhiri, hui, wānanga and whakawhanaungatanga were common practices at events and sports programmes. Referees learn te reo calls. Haka waiatai part of tournament. Urban Māori created connection with the marae – through Te Matatini</p> <p>Māori forms of sport and recreation increase the attention to Māori sports such as Ki-o-Rahi and waka ama, as well as encouraging use of te reo and recognising kapa haka as a sport.</p>
Giving service – building leadership capability	Giving service (volunteering) to the wider collective, opportunities to learn, and to gain leadership skills. Leadership roles and opportunities are noted as especially important for rangatahi.
Health and safety	Learning about water safety in rivers, lakes and oceans to combat NZ’s preventable drowning statistics. Awareness of Māori rates of drowning, importance of water safety for whole whānau. Preparation of mahinga kai (gardening) increased food security for whānau
Reduction of harmful health behaviours	Reduction in smoking, drugs, alcohol and gambling. Events are alcohol free - smoke free – whānau encouraged with the team to give up smoking.
Revitalising the marae	<p>Creating networks that strengthened connections between a variety of kura, marae, waka ama clubs, other sports clubs and organisations</p> <p>Māori spaces such as marae as important platforms to a sport and exercise structure. Capability built within marae, running activities and events.</p>
Supporting Māori aspiration for Whānau Ora.	‘A micro-Maori approach’, ‘A lot of our people are deciding they want to be doing things that can support whānau to be doing bigger and better things’. HOP activities support mana motuhake - encouraging whānau to pursue aspirations.